MODERN IDEAS AND METHODS

JOHN EADES

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MODERN IDEAS AND METHODS.

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FOR

SCHOOL TEACHERS AND STUDENTS IN TRAINING

From a Practical Teacher's Note Book

BY

JOHN EADES

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"New times demand new measures and new men;
The world advances, and in time outgrows
The laws that in our fathers' day were best;
And, doubtless, after us, some purer scheme
Will be shaped out by wiser men than we,
Made wiser by the steady growth of truth."

JAMES RUSSELL LOWELL.

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PREFACE.

THIS book is not intended to supplant, but to supplement, the ordinary text-book on School Method. It is not a collection of ingenious "wrinkles," but an attempt to give guidance to teachers and students in method on modern lines, in a way somewhat different from that found in the usual method books. It is theory and practice combined, and is the outcome of many years' teaching experience. The notes have been made from time to time, as circumstance and incident gave rise to them. There may be a little reiteration here and there, but that will serve to impress the points more firmly on the mind of the reader.

It is hoped that the collection will prove of great value to young teachers and to students in training, and perhaps of some value to older teachers who are open to new ideas and new suggestions.

Many of the General Notes will prove helpful to Sunday School teachers.

J. E.

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Chapter I.

GENERAL NOTES.

Co-operation in Education.

Education can only be fully effective when there is the friendly co-operation of all concerned—members of Education Committees, officials, teachers, parents, and employers of labour. The teacher can do a great deal towards securing the co-operation of parents and employers. The parents' lack of sympathy with the teacher is often due to ignorance of the teacher's aims and work; and the teacher's lack of sympathy with the parents is just as frequently due to ignorance of home conditions.

A teacher deals with a child very differently when the home circumstances are in some measure known to him. An occasional visit to the home—not in the capacity of an attendance officer—and a friendly chat with father or mother, or both, about Tommy and his work and prospects, will do wonders on both sides.

And then an occasional "Open Afternoon" at the school, when parents can come and see the conditions under which their children work, and can at the same time have a word or two with the class teacher, is a valuable means of arousing parental interest. Here, also, is a good opportunity for the 'Head' to gather the parents in the Hall for a brief period, to have a talk or conference on any matter of moment; *e.g.*, "The use of the Free Library"; "The value of manual exercises in school work"; "The necessity of regularity and punctuality in

school attendance as a training for the future," and so on. Give parents an opportunity to express their opinions if they wish to do so, and then, if there is divergence of opinion, it can probably be adjusted. Wind up the afternoon with a little smart Swedish drill and a few good songs, and the parents will have had a good time and they will come again; moreover, they will afterwards support your efforts by bringing all the home influences to bear upon the child, and will help the teacher to make the best use of the child's school opportunities.

In a similar way the teacher can get into touch with employers in the district; he can invite them to the school to look round, or he can visit their places of employment and get to know something of their requirements; at the same time, he will let them know his aims and ideals. This interchange of views will form a valuable link between the two, and will enable the teacher to find suitable work for many boys and girls when the time comes for them to leave school.

Teachers and Parents. The relationship between teacher and parent is of vital importance to the progress of the child and to the success of the school. Opportunities must be found to bring teacher and parent together. This can be done in the ways indicated in the previous note, also by conferences with parents, and by the head teacher setting aside, say, two hours—2 p.m. to 4 p.m.—on one afternoon per week for interviews. In these ways head teacher and class teacher can obtain a good deal of information about any particular pupil, which will be found very helpful in dealing

with him or her in school. At the same time the parent becomes better acquainted with school conditions and requirements, and with the educational progress that his or her child is making.

Meetings of this kind will dispel any antagonism that exists between school and home; teachers will understand better the parents' point of view, and parents will realize that the teachers' interest lies beyond ordinary school subjects; they will see that it extends into the realm of moral training and general welfare.

The two qualities necessary for successful intercourse between parent and teacher are sympathy and tact. These qualities the teacher must have whether the parent has them or no.

Co-operation in School.

Competition and emulation are of value when used judiciously, but in school work they should be the exception rather than the rule. The less the school reflects the competitive commercial spirit, the better. Co-operation should be the ruling idea.

In many subjects children should be allowed to work in pairs; not pairs chosen in any haphazard way, but selected so that the one child can be a real help to the other. A comparatively dull child will gain a great deal by a working association with a brighter, cleverer comrade; while the explanation of, and attention to, detail needed for the help of the weaker vessel will be a source of enjoyment to the better scholar, and a means of fixing things more firmly in his own mind.

Practical arithmetic, mensuration, and geometry especially lend themselves to this method. One boy

can use the ruler or tape measure, while the other makes a rough sketch and takes down particulars. The paper containing the result can be placed on the desk between them ; they can then discuss a suitable scale for it, calculate area, cost of covering, etc., and compare results.

Composition, and many lessons in geography, history, and science also admit of co-operation. How much better it is to create and foster in the minds of the children a help-one-another spirit, than to train each to fight for his own hand and to seek glory for himself !

Methods of co-operation may be noisy at times, but what of that ? What need is there in the class-room for the silence of the examination room ? If the gentle hubbub is due to the checking of each other's work, to an exchange of views, to a little argument as to the best method of solving a problem, or of dealing with a certain subject, let it pass.

There is only one danger to be guarded against, due to the inherent laziness of a small percentage of children, namely, that one child may merely copy the work of the other instead of exerting himself and using his own brains. The danger can be reduced to a minimum, if not entirely obliterated, by the teacher's careful and constant supervision, and by training all the children to realize the value to themselves of co-operation and of personal and persistent effort.

When the Head Teacher is a Hindrance.

The unwise and often unjust treatment meted out by certain Head Teachers to the members of their staff is one considerable cause of the lack of suitable candidates for the teaching profession ; and,

as far as can be ascertained, women are greater sinners in this direction than men, probably because they are more 'nervy.'

It is by no means a rare thing to hear a teacher during a holiday give expression to the feeling that he or she dreads returning to school owing to the conduct of the Head. Some Head Teachers seem to forget that they have ever been Class Teachers. They show no sympathy with an assistant's difficulties; they make no allowances for the different capabilities of the children—all must be made to toe the same mark; they seem to revel in finding fault, and rarely condescend to a word of praise; in fact, they spend their time in 'nagging' their teachers instead of helping them. How much more serviceable it would be both to teacher and class to take out nine or ten of the backward children and *teach* them, instead of wasting the time in finding fault and in excessive supervision!

There are other Head Teachers who are the impersonation of 'Suspicion.' Although their assistants are college-trained, and are honest men and women, they cannot trust them; they look upon them as people likely to be up to some trickery, or anxious to slip their duties at every available opportunity. They must see every bit of work that is done; every minute of time must be accounted for; every method used must be *their* method. There is no freedom, and consequently no individuality, and little, if any, initiative. Every teacher is a replica of the Head; everything is cut and dried to one set pattern—the Head Teacher's, which is not always and necessarily the best pattern.

If a Head Teacher has on his staff a man who

'slacks,' who shows little interest in his work, or in the general welfare of the children and the school, he should secure his dismissal, for such a teacher has missed his vocation; but surely a trained teacher of that type is a rare exception. There is no doubt that the unvarying suspicious attitude of a Head Teacher is calculated to make such exceptions more numerous.

There are still other Heads who are so tactless as to reprimand their teachers in the presence of the children, and still they expect them to maintain discipline, and retain the respect of their pupils!

There can never be a suitable educational 'atmosphere' under any of these conditions. Certain 'paper' results may be produced, but they are of little value. Only by harmonious working, by happy, healthy conditions, by mutual consideration, sympathy, and tact can the best and truest educational results be obtained. The great majority of Head Teachers play the part their name implies: they organize, they advise, and they teach. It is the duty of all to do likewise.

The School Staff. An important factor in the successful working of any school is that there be harmony and unity among the members of the staff. We all know from experience that there are certain people we meet who repel us, yet we know not why. Somehow they seem to exist outside our circle of thought and feeling; and, owing to the existence of an invisible something between us, we can never harmonize, and we are never able to understand each other.

There are others who appeal to us immediately we come into contact with them; we enjoy their

conversation, and we feel we can associate with them and work with them. The same condition of things applies to the members of a school staff. If the Head cannot work with any member of the staff, it may not be through inefficiency, or any other cause that can be easily defined; but if there is an invisible disturbing element, it is better for all concerned that that member of the staff should find another school. Or if there is one member of the staff who generates a wet-blanket influence, or who tends to produce a feeling of discontent among the other members, he or she also should seek a new sphere of labour, voluntarily or otherwise. Complete harmony and a happy, sympathetic atmosphere are indispensable elements in the successful working of any school.

The Staff Meeting. The Staff Meeting has, for a number of years, been a recognized feature in all good schools.

In earlier days, it consisted mainly of criticizing a lesson given by one of the members of the staff, each of whom in turn gave a model lesson for the benefit of himself and others. These lessons were of questionable value, as in most cases the Head never gave a lesson, and the older and more experienced teachers wished to do likewise, and resented criticism, especially if the younger teachers took part. When, for any reason, the appointed lesson was not given, the meeting often resolved itself into a fault-finding opportunity for the Head, and occasionally for recrimination on the part of some members of the staff.

But that was the experimental stage. To-day,

a tactful Head Teacher points out any delinquency or weakness to the individual concerned, and he does it privately; the Staff Meeting is reserved for better things. A meeting for half-an-hour once a week at the close of afternoon school to discuss matters of method, organization, and discipline, and for an interchange of opinion on any subject of immediate interest that is germane to the harmonious and improved working of the school, will be found of great value. It will keep teachers in touch with modern thought, changes, and improvements, and so prevent them settling into ruts; it will keep them acquainted with the work done by their colleagues in the various classes of the school; it will encourage experiment and initiative, and give teachers an outlook far beyond the four walls of their own classrooms.

Apart from the various phases of the ordinary school subjects, there is a wide field for the choice of topics, as will be seen from the various headings in these General Notes.

Specialization. This has been in use in my school for a number of years, and is a proved success. In the lower standards, art and music only are specialized; if a teacher well qualified in nature-study is available, that subject also is added. In the upper standards, beginning with the fourth, one teacher takes all the mathematical work, including geometry; another takes the art and English subjects; and another takes geography, history, science, and music.

A teacher can always teach best those subjects about which he knows most, and in which he is

enthusiastically interested. His enthusiasm, and interest, and keenness infect his pupils and cause them to produce more and better work. To hear a teacher who dislikes history give a history lesson, or one who has no interest in and little acquaintance with nature-study give a lesson in that subject, is sufficient to convince any unprejudiced observer of the value of specialization. How much more economical and profitable to let such a teacher spend his time and energy in teaching something in which he is interested; for it is a rare thing to meet a teacher who has not one or more favourite subjects.

Some people who have not tried specialization say it must affect adversely the tone and discipline of the school; the answer of experience is that it does nothing of the kind.

There is an initial difficulty in making the time-table; when that is done the remainder is easy. Teachers like the system; children like it; there is no rush, no overstrain; the standard of attainment is higher with less work, and the general result is in every way satisfactory.

The Three R's.

The attempt to make every child at the term examination get all sums correct, have no errors in spelling, do beautiful writing and faultless figures, and obtain the highest mark for mechanical reading, is a legacy from the bad old days of "Payment by Results."

The aim of those days meant hours of drudgery for teachers and children alike; they not infrequently ruined a teacher's health, and caused many a child to hate the very name of school. They also caused many talented young men and women, who once

thought of teaching as a life profession, to pass by on the other side. These aims still linger here and there, but they are on their last legs; the development and extension of child study is pronouncing banishment upon them.

Modern teachers recognize that no two children in any class are alike; some are strong on the literary side, some on the mathematical, some on both, a few on neither. Some children simply cannot spell, or calculate accurately beyond a certain very elementary stage; and the attempt to make them toe the same line as those to whom these subjects present no difficulty, is both wasteful and cruel.

Everybody will agree that the three R's are of fundamental importance to any boy or girl who wishes to be a student, or who desires to enter professional or commercial life; these *must* have a thorough grasp of them. Moreover, *every* child should, as far as possible, receive a good grounding in the mechanical elements of the three R's, because, taken together, they are the foundation-stones of knowledge; and this must be done, even at the cost of a certain amount of 'grind,' which seems to be inseparable from these subjects.

At the same time, we must remember that there are many children who have neither the capacity, nor the desire, for professional life; and parental insistence on some of them taking up these occupations accounts for the failures we hear of, and the consequent disgust of their employers, who usually blame the schools, instead of blaming the parents. Many a lad has been thrust into an office, who would have made a capable joiner or mechanic. But many children who have little capacity for more

than one of the three R's, frequently take a delight in nature-study, literature, handwork, drawing, painting, or music. The education and training of such children should proceed mainly through the subjects that appeal to them, rather than through those which custom has hitherto prescribed.

The Danger of Ruts.

A very subtle danger lying in the path of the certificated teacher of several years' standing is the tendency to settle down into a kind of professional rut. He has safely forded the examination streams with their swiftly-flowing currents that at times threatened to rush him off his feet, and now the reaction sets in, and he feels inclined to relax and take things easy. Of course a proper rest from arduous study is very necessary, but if it be too prolonged, deterioration sets in.

One plan of avoiding this is to build up a good library, and make constant use of it. The bias may be towards literature, or history, or science; but, in addition to books on these subjects, there should be up-to-date works on matters more closely related to one's professional work; books on child study, physiology, modern teaching methods, school systems of other countries, etc. If the mind be always open to new suggestions the teacher will have no difficulty in keeping up with the times, or even in advance of them. It is as necessary for the teacher to have access to the latest books on school organization and method as it is for the medical man to have access to the latest works on surgery and medicine. The more widely-read and cultured the teacher is, the greater will be his influence in moulding the characters of his pupils.

Living, yet Dead.

It is not infrequently one's painful experience to meet with teachers who are physically alive, but educationally dead. Having taken their college course and received their final certificate, they have considered that as their goal in education, and there they have rested and probably will rest until they are compelled to seek different employment, or until the retiring age comes round.

There are many teachers in our schools to-day —head teachers as well as class teachers—who never read a book dealing with education, and who apparently from one year to another never study an educational article outside the columns of the weekly professional journals. They pick up hints and tricks from papers which cater for that kind of thing, but as for trying to keep in touch with the advance of educational thought, or to keep up-to-date in methods of teaching, they never think of it. And yet their whole life, which includes their school life, is profoundly affected by their intellectual condition. It is common experience how self-sufficient, narrow, and stereotyped that teacher becomes who neglects to replenish his mind with the food provided by great thinkers, including those who are spending themselves on subjects pertaining to education.

This indifference is not always due to slackness or to laziness, it is often due to allowing studies to slide, until finally serious subjects are not read at all. They have no attraction; they do not interest. Often these teachers have taught the same classes for several years, so they think they know the subject-matter of the various subjects well enough. What was good for last year's pupils is good for this year's; and so they are of opinion that the lessons they have

once prepared are like some sermons, they will last a lifetime.

Every teacher should know that the stereotyped mind coming into contact with the active child mind does great injury. The teacher who has long given up learning ought to give up teaching. It is only by keeping our own intellectual life fresh and vigorous that we can impress the minds of the children in our charge, develop in them the forces of intelligence, and give them a love for learning, which will remain with them long after school days are over.

Educational Inertia. Teachers are largely conservative in their views regarding educational methods. Any new idea is looked upon with a certain amount of suspicion. They have taught certain subjects successfully for so many years, so what need have they for a new psychology, or a new pedagogy ? The answer to much of this is that children have learnt a great deal in days gone by in spite of the indifferent methods used by teachers. And it is equally true that unscientific methods have stunted the mental growth of thousands of children which never would have been stunted but for their operation.

One is prepared to admit that the personality of the teacher is the most important factor ; but personality cannot make up for deficiencies in training, nor can it fill in gaps of essential knowledge. If teachers are to succeed in developing every child's physical, moral, and intellectual powers to their full capacity, they must have open minds, they must be prepared to consider new ideas and new methods, they must be willing to try them, and then to adopt

such as they find useful to themselves and suitable for their pupils.

Hold fast to your Ideals.

Most students, on the completion of their college course, enter upon their life's work with joy and enthusiasm; they have numerous ideals which they are anxious to put into practice, and they are glad that the time has arrived for them to be tried. But as the days go by there is not infrequently bitter disillusionment; the pursuit of the ideals generated in college days is found to be in many cases impracticable, if not impossible.

Evidently this should not be so; and when the first spasm of disappointment is over the young teacher should set to work to find out the cause of his failure. It may be the fault of the Head Teacher, who has no sympathy with any 'new-fangled' notions about education, and who believes that what was good enough in his boyhood days is good enough now. There are people of this type belonging to both sexes, and it is the duty of Education Authorities to see to it that such teachers either undertake to keep pace with the advance of educational thought and practice, or give place to others who will. It is disastrous for an enthusiastic young teacher to be appointed to a school in which the old wooden, treadmill, grinding methods of half a century ago are still in full swing. Any young teacher who finds himself or herself in such a daily environment will be well advised to leave at the end of the first term.

But it is not always the Head Teacher's fault. Very frequently young teachers are staggered by the magnitude of their new responsibility. School Practice

was child's play compared with this. The children may have been troublesome during those practice periods; but there was time off, and the Head Teacher, or the Master or Mistress of Method, was always at their elbow to assist. Now they are 'on their own,' there are fifty different 'young ideas' to be trained how to shoot; there are many subjects to teach; and the teaching has to be effective. So, with one thing and another, the ideal they cherished, of moulding and developing the characters of the children, and of training them to become good and useful citizens, seems to be quite crowded out; and as time passes on, other ideals go to keep it company.

It is as well to remember that this always happens where children are treated in the mass, instead of being regarded as distinct, living, growing individuals. The young teacher must study the child mind at first hand, and get to know as much about it as the medical man knows about the body. If he follows up his college studies by researches in this direction, there will be no lack of interest; and he will find his ideals stimulated instead of crushed. He will soon find out how to deal with every individual in his class, and so will be able to foster and develop the best that is in each. This can be done only by taking a personal interest in each child, by discovering his capabilities, by getting to know as much as possible of his home conditions and out-of-school life, and so being in a position to view things from his standpoint.

With this knowledge at his disposal, and by making use of it with sympathy and tact, he will be conscious that, after all, his ideals are not altogether unattainable, and that he is bringing to bear upon the growing lives and developing characters of the

children an influence that will continue to make for righteousness; and, in the days to come, his pupils will think of him with feelings of gratitude as one who was a real friend and guide of their youth.

For the College Student.

The teacher-student has to be on his guard against the faddist who gives one the impression that his is the only subject of value in the whole curriculum. It is wise to keep subjects in their proper perspective—to be careful not to overrate the importance of one subject, and work it at the expense of others equally important. On the other hand, he must be on his guard against settling down into ruts, which are fatal to all educational progress. He must take a sane and intelligent view of the educational principles propounded in the lecture-room, and must test their value during his periods of school practice and in his class teaching when college days are over.

An educational principle cannot be applied mechanically and indiscriminately to all children; the human element is an important factor, and must always be taken into consideration. All children are not alike either in temperament or capacity, and we must modify our principle to fit the child, not try to make the child fit the principle. Education is not an exact science like mathematics; its principles are only general principles, and they have to be adapted to suit the varying mental and physical conditions of the individual child.

Don't do all the Work.

Unless some teachers are doing all the work, or nearly all of it, they seem to think they are not earning their salary. They must do the talking, and experi-

menting, and fussing about, or things will be at a standstill. But all this is due to a mistaken idea. The normal child is eager to know, and to do, and to find things out for himself; when he is treated as a member of a church congregation, he tends to lose his desire to know, and his energy for work disappears.

This kind of teacher, when he puts one or two problems in arithmetic on the blackboard for the children to work, cannot refrain from making sure that they all know how to solve them before they begin to put the solutions into their exercise books. He gives them an object to draw; but the preliminary talk makes sure that the child knows width, height, wide parts, narrow parts, where the handle is joined, if there is a handle, and every other detail about it. When the teacher's introductory talk is over, no room is left for the child's independent judgment; and when the lesson is finished he is no more able to deal with a new object without assistance than he was at the beginning. This method may produce neat books, but it dulls a child's intellect and kills his initiative.

It is the teacher's business to know where to help, and where to leave the child to his own resources. The child may blunder; he may stumble; it is as well that he should. Not until he feels the need of help should help be given.

A Weak Spot in Teaching.

A teacher carefully prepares his lesson, arranges his specimens and illustrations, and starts off with a flourish of trumpets to accomplish his purpose. But the careful observer soon notices that it is the teacher's lesson

rather than the children's; he is the prime mover, talker, and worker. Just occasionally a child here and there is allowed to interpose with a question or a remark, but there isn't much time for that sort of thing; the teacher must get through the amount of information he has marked out, or the heavens will fall; and so he forges ahead.

But one by one his followers begin to drop out; they really have nothing to do but sit still, close their mouths, open their eyes and ears, and take what the teacher has prepared for them, as good little boys and girls always should. As the lesson proceeds, the ranks of the inattentives and troublesomes find fresh recruits in spite of numerous attempts to pull them up; until, when near the end of the journey, but for the devotion of a handful of quiet souls, the teacher would be ploughing his lonely furrow.

What is the mysterious cause of all this waste of energy? The simple fact that the lesson has been the teacher's and not the children's; there has been a lack of co-operative effort, and so the lesson has bled to death on its journey. The teacher has failed to realize that the child mind is a living thing, that activity is its chief characteristic, and that its interest will accompany and follow in the wake of that activity. Let the child co-operate; give him something to find out, something to do; leave places in your lesson for the discharge of his pent-up energies, and then his thoughts will not wander to the old watch-spring in his pocket, or the piece of paper under the desk; neither will he have a desire to tickle the ear of the boy in front of him, or to stick a pin into his neighbour's leg. If teachers would keep this in mind, they would have fewer 'backwards and troublesomes,'

and most of their disciplinary difficulties would disappear.

A Word of Warning. The reaction from the abolition of the old system of examinations has, as was to be feared, led some teachers too far in the opposite direction. Some who consider themselves 'advanced' will tell you that it matters very little what subjects are taught in school; the important thing is *how* they are taught; and they express no small scorn for mechanical accuracy, or for anything in the nature of 'grind.'

There are always some people who work an ideal until it is as tinny and distasteful as a cheap piano. Give them a word, or a catch-phrase, and they are on the scent in a moment. 'Faculty training,' 'correlation,' 'dramatization,' 'self-activity,' 'self-realization,' all appear in their turn, and are ridden to death by some of their advocates.

The cultivation of intelligence is of primary importance, but surely it can be cultivated by the use of valuable material as well as by that which, for any other purpose, is quite useless. What is taught certainly does matter. Accuracy, too, is something which cannot be waived aside. To say that it does not matter whether a child gets a sum in arithmetic correct or no, so that he understands the principle and knows how to do it, is the height of midsummer madness. Neither can memory training be neglected. Both accuracy and memory will be needed in the wider world of life, and both are developed by repetition and practice. Call it drudgery if you like; but it is very necessary drudgery.

Heuristic Methods.

'Heuristic' comes from a Greek word which means 'to find out,' and heuristic methods are those which allow children to find out things for themselves, instead of being told by the teacher. Many things must be told. It would be folly to waste valuable time insisting upon children finding out things that are really beyond their powers of discovery, *e.g.*, the pronunciation of words during a class lesson, or historical facts in a new history lesson.

But many things can be discovered, particularly those connected with the sciences. This effort at discovery develops the power of initiative; it cultivates inventiveness and strengthens the powers of perseverance and endurance—qualities which are of vital importance in the formation of sterling character. It is a good rule, which, of course, has its exceptions, not to tell children anything that with a little trouble and effort they can find out for themselves. Acquirements which cost us something are valued most. It is only by effort and struggle and persistence that our highest self can be fully developed.

Questioning.

Skill in asking questions is almost as important to the teacher as to the K.C. Some teachers use questions only for examination purposes, but their most important use is for teaching purposes. Suitable questions lead children to see that they must exert themselves, and that the lesson is theirs rather than the teacher's. They help the pupils to acquire additional knowledge through the knowledge they already possess. Good questions are like sign-posts, indicating the

direction in which the child must make effort in order to acquire further knowledge.

The teacher must always frame his questions to suit the capacity of the children; the younger the children, the more pointed the questions must be; but they should never be too vague in any class. Questions that admit of a variety of answers, all more or less correct, waste the time of the class and lead to confusion of thought.

Avoid putting suggestive questions at the end of a statement; *e.g.*, "The Thames rises in the Cotswold Hills, *doesn't it?*" Avoid also questions on facts unknown to the children and which admit of guessing only. Elliptical questions should be very rarely used; *e.g.*, "Ben Nevis is the highest mountain in ——— (Great Britain)." They are of little or no value. It is much better for the child to be asked to make the complete statement. Questions properly used will lead the children to acquire ideas by observation, comparison, reason, and judgment; and they will be far more firmly fixed in their minds than those acquired by mere 'telling.'

Dramatizing. Every observer knows how strong the dramatic instinct is in children; and teachers know that it can be made very useful in many school subjects. History lends itself constantly to this instinct. Children love to pretend; they delight to impersonate King John, Hubert, Arthur, Robin Hood, Wat Tyler, Boadicea, and Queen Elizabeth. They should, however, be well acquainted with the particular story they propose to dramatize, and then act it under the guidance of the teacher; and, as far as possible, they should use

their own language, not that of a dramatized reader made for the purpose. It is sheer waste of time allowing children to memorize a large number of lines merely for the sake of producing a 'show' piece. Let them clothe their ideas in their own words; it will train them in expressing their thoughts more readily and accurately.

Fairy tales, too, and certain poems may often be acted. But we must beware of overdoing the dramatic side and applying it to everything. Keep it in its proper place, and it can be made useful and interesting.

Correlation. This is a word which has been much used and much abused. Taken in a proper way correlation is of great value. Many school subjects are very closely related, *e.g.*, geography, history, and literature; science and mathematics; drawing and handwork; and the wise teacher will select points from one that will greatly assist in comprehending the other. At the same time, if he is teaching geography, that must be the main line of his lesson; history and literature will be subsidiary lines. If his lesson is a literature lesson, literature must be its main theme; history, geography, and drawing will be accessories. If a teacher is giving a literature lesson on *David Copperfield*, and reference is made to Mr. Dick and King Charles's head, he would be abusing correlation to spend the greater part of the lesson in talking about King Charles and the events that led up to his overthrow and execution.

On the other hand, if the older children are reading and studying the play of 'Julius Cæsar,' it

will be a great help to have a map of Italy before the class, as also a large plan of Rome on the blackboard showing the places mentioned in the play; this plan may afterwards be copied by the children into their note books. A brief sketch of the life of Cæsar will add interest to the lesson, and so will an examination of Roman coins or pottery. The children may also be allowed in the handicraft lesson to make a clay model of the Forum. In this way, correlation may be of great value in producing permanent impressions and lasting knowledge.

Faculty Training. The old psychologists believed in the training of 'faculties'; the Herbartian psychologists of to-day severely condemn it. They argue that a mathematical training does not produce a mental quality capable of unravelling a knotty business problem, or a criminal mystery; and that the ability to do neat and clean book-work does not carry with it a habit of cleanness in person and neatness in dress.

There is a large measure of truth in this position; but the theory does not always hold good. The senses are certainly improved by special training. A course of formal training in music gives the ear a fine sensitiveness to tone and pitch; a special training in art improves the power of the eye and cultivates a finer taste for form and colour in all directions; and there is evidence that training children to observe in school lessons makes them more observant of everyday things.

Wherever in practice we find that certain educational principles produce the desired results, we must not lightly throw them aside.

The Teacher's Aim. The teacher's aim with regard to school work should be to see that it bears a close relation to the child's after-school life. Subjects that are incapable of further expansion when school days are over ought to be omitted from the curriculum altogether. What the child learns in school should help him to have an intelligent interest in his environment. It should lead him to take care of his health, and to attend to the physical well-being of his whole body; it should cause him to recognize the value of time and money, and help him to use them to the best advantage both for himself and for others; it should give him the power to adapt himself to circumstances, and make him thoughtful and self-reliant; it should teach him to be a doer and not merely a receiver in the economy of life. In fact, the teacher's aim should be to train his pupils to be real workers, and to develop in them all the characteristics that go towards making honourable and worthy citizens.

Avoid Extremes. And this advice is as necessary for the teacher as for those in other walks of life. Some extreme theorists say that children should be taught chiefly those things they do not wish to be taught. They ought to be trained from their earliest years to do necessary though distasteful work, such as has to be done at times in ordinary life by everybody, and even for a livelihood by some. Only in this way, they tell us, can education be true to life. Others say the child should be taught only those subjects he is fond of, and should for the most part be allowed to do as he likes; this they call "self-realization." Both extremes

are wrong. The former advocates apparently think it is dangerous to make school a happy place, for in such an atmosphere there would be produced only slackers and snobs; the latter are of opinion that school should be heaven all the time—that is, for the child.

Deliberately to choose for children difficult and disagreeable tasks, simply because they are difficult and disagreeable, in a word, to deify drudgery as drudgery, is too foolish and ridiculous to talk about. On the other hand, to make the child the only judge of what he should be taught, as though he knew what was best for him—a knowledge that only comes to any of us through training and experience—is almost equally foolish, and harmful. A child likes to stay up late at night, he likes to eat too much pastry, and too many sweetmeats, and he is fond of playing with fire; but these things may be very injurious to him. On the other hand there are valuable things which many children would avoid if they could; such things as personal cleanliness, helping others, and taking part in certain physical exercises and sports, which are unquestionably beneficial to them.

The medium between these extremes is the proper course. There are undesirable elements in the nature of nearly every child that must be repressed, and there are desirable ones that should be cultivated. If school is to be a preparation for life, children must at times be called upon to do things they would rather not do. In some directions they must be trained in self-repression, and in others in self-realization. Children often dislike a subject when one teacher takes it, and they like it when another takes it; lack of interest in a subject is not always the

child's fault. As far as is possible school should be made an attractive place, and a happy activity should be its prevailing characteristic.

The Successful and the Unsuccessful Teacher.

Every observer knows that teachers differ as much as children; and occasionally the difference is very marked. One teacher seems to make such a labour of his work; he is frequently 'breathing out threatenings and slaughter' against delinquents; he spends so much time in lecturing them in strident tones, that all his energy apparently escapes through his mouth. With no humour, and little, if any, sympathy, he works like a machine often out of gear. The result is seen in his pupils; many of them are sullen, obstinate, dull, and miserable.

The teacher in the next room is quite different. His work seems easy enough; he talks quietly and naturally to the children, has his joke when occasion offers, and the children enjoy a good hearty laugh. At the same time they know that if any one of them shirks or does not 'act square' he will soon be in 'durance vile.' The result here is also seen in the pupils; they are willing, obedient, industrious, and happy.

Most of this difference is due to personality; but if the matter be taken in time, no teacher need be like the first example, and every teacher may become very much like the second.

Control of the Voice.

Voice control is of great importance. If a teacher has lost control, as may be the case when one has been teaching for several years in a large room occupied

by three or four different classes, and there has been a daily competition among the teachers as to which could best make himself heard above the others, it is hard to reform ; it is as difficult to regain control of the voice as it is for a leopard to change its spots.

"Oh! how that teacher's tongue wags!" said a Government Inspector to me some years ago. "When I hear a teacher talking on like a gramophone with a big horn, I usually go into the classroom and say to her: 'Would you mind allowing the children to talk a little, Miss, just to rest your voice?'"

Of course that was very cutting, but, in some cases, such reproofs are deserved. Information flies out in a ceaseless torrent, but it rarely hits anybody.

One of George Eliot's characters says :—

> "Some folks' tongues are like the clocks that keep on striking, not to tell you the time of day, but because there's summat wrong in their inside."

If the teacher speaks quietly, the children will become eager to listen ; it is their business to listen, not the teacher's to make them hear. If a quiet tone be the rule, then it will be possible to pull up any playful urchin, or wandering mind, in a moment. If the top note is always in use, it has no effect on a special occasion ; for the saying :—"A noisy teacher makes a noisy class," is as true as it is ancient. How much better it is to follow Shakespeare's advice when he says :—

> "When words are scarce, they're seldom spent in vain."

The True Disciplinarian.

Herbert Spencer says:—"The aim of discipline should be to produce a self-governing being."

A. C. Benson says:—"The power of maintaining discipline is the *unum necessarium* for a teacher; if he has not got it and cannot acquire it, he had better sweep a crossing."

The true disciplinarian avoids extremes and finds the happy medium. One kind of disciplinarian is the forceful man, or masculine woman, who believes in, and carries out, the old proverb of "Spare the rod and spoil the child." This type secures order by a rule of iron, and a regime of repression. He compels obedience; he never imbues the children with a desire to respond. He plays his part like the drill-sergeant; he never wins willing co-operation. The result is seen in the wooden, stereotyped, mechanical, self-same way in which the children do their work and deport themselves.

The other extreme is where children are allowed to do very much as they like; where 'free discipline' runs riot, and the school or class becomes a bear-garden. The result of this is seen in the absence of the power of concentration, the distaste for certain kinds of necessary work, and the lack of self-control and staying power.

One extreme is as bad as the other; the true disciplinarian avoids both. He is one who believes in the eternal truth of Tennyson's lines:—

"Self-reverence, self-knowledge, self-control,
These three alone lead life to sovereign power."

To train children to acquire possession of these three great powers is the most important work we have to do. To accomplish it there must be a careful

and constant study of each child in our charge. We must aim at moulding their desires and tastes, and influencing their will, so that it will always act in the right way and at the right time; conduct will then be governed from within rather than from without.

This is the work of the true disciplinarian; it means infinite patience, constant effort, and boundless sympathy; but he will be amply repaid by the results.

The Power of the Eyes.

The teacher who knows how to use his eyes during class teaching will often save his voice. If he is alert and observant, every child in the class will feel that the teacher is always looking at him, and will realize that it is not possible to be idle, inattentive, or playful, without being seen. Nothing should happen in the class without the teacher knowing it. Children should learn from experience that wrong-doing of any kind is sure to be seen or found out by the teacher. The use of the eyes in this way will be found far more valuable than using the voice to pull up a delinquent in the middle of a statement or narrative—a proceeding that breaks the thread of thought and often distracts the attention of the whole class.

The teacher's eyes should be able to tell from the eyes of his pupils whether they are following his teaching thoughtfully. Many children are apparently attentive; they sit quite still and look straight before them; but a glance at their eyes will tell the observant teacher that their thoughts are far away, and that they come back to the world of reality only now and again, and just catch one or two disconnected ideas of the lesson that is being given. No lesson can be considered a success unless it is being grasped

by most of the children in the class ; and the teacher can usually gauge the effect his lesson is having if he watches the eyes of the children.

Again, eyes should be trained to see if there is anything marring the general appearance of the school or classroom. What a contrast the visitor sees in the tidiness or untidiness of various rooms and schools ! In the one case his eye sees at a glance that the teacher has heard of the proverb which says :—" A place for everything, and everything in its place." The room is clean and orderly, pictures and plants, models and specimens, are nicely arranged and pleasing to the eye, and the children are trained to help in keeping them so. In another case the visitor sees rubbish in corners, books and papers lying about on cupboards, scraps of used paper on the floor, maps ragged, pictures awry, desks out of place, and cupboard doors open showing the interior in a state of chaos. Many of the children in such a class often correspond to their environment ; torn clothing, dirty faces, and uncombed hair are very much in evidence.

These are the things that show the difference between the observant and the unobservant teacher ; and often between the enthusiastic, hard-working teacher, and the lazy, indifferent teacher.

Sympathy of the Right Sort.

Everybody agrees that in our schools during the past decade there has been a remarkable growth of sympathy for children and a wise consideration of child life. This is all to the good. The point that needs watching is that this sympathy does not produce a sickly sentimentality that allows the child to do as

he likes under the guise of self-realization. On one side of human nature self-realization ought to become self-repression, or there is trouble in store.

Moreover, no child respects a teacher or parent who always lets him have his own way. The teacher may be loving, and kindly, and 'easiful,' and perhaps demonstrative; but the normal child has far more regard for the teacher who is just and strong, and demands the highest effort. Of course, there must be sympathy and approval and encouragement when children are doing their best, even though they may not succeed in achieving their aim. But there must also be blame and severity for the sloven and the slacker. Honeyed words and ready forgiveness for all offences are fatal to true discipline, and work moral injury to the child.

The Primrose Way.

There is a real danger in these days of the swing of the pendulum going too far in the direction of serving up all school subjects in such appetizing, dainty fashion, that the pupil sucks them in without effort like milk from a feeding bottle. Tables without tears, history without dates, music without scales, are all the rage, and if carried too far are calculated to produce a flabby, invertebrate generation.

No real teacher would ever value a task merely because it is hard, or reject a short easy method in favour of a longer or more difficult one. But any teacher who aims at removing every difficulty from the path of the young learner is doing him moral injury. It is only by overcoming difficulties that any of us gain strength to overcome others; and it is only by working against certain natural resistances

that children become strong. If education in school is to prepare the child for its life after school, it must not be swept clean of its obstacles. A child who does not begin his mental discipline until he leaves school is in for a bad time. We must never take the sting out of things by giving too much help, or by using too much *camouflage.*

A good deal of the joy of school life and of ordinary life arises from the knowledge of difficulties conquered, and of hard tasks accomplished. To a normal, healthy child, work that is always smooth and easy becomes monotonous and uninteresting. He dislikes being fed with a spoon; he longs for the sweets of victory. Children must be led to do things in a spirit of obedience and faith, even to do things they would rather not do, things that mean a certain amount of self-sacrifice and cost considerable effort; because only in this way can they increase in intellectual growth and moral power. Of course, lessons should be made as interesting as possible; but that does not mean to say that all the knots should be ironed out flat.

Nor should children be allowed to do what subjects they please, when they please, and how they please, under the conjuring term of self-realization. A great deal of talk along this line is sentimental nonsense. Moreover, the self-realization preached by certain would-be reformers is simply unbridled licence. It never has been and never will be good for children to do as they like. They are no more competent to be the judges of school subjects and school methods than they are of the values of various foodstuffs. It is a good thing for children to have to do some things at certain times simply because

they do not want to do them. All such requirements have real disciplinary value, and aid very materially in making adequate preparation for their life in the industrial and social spheres of the future.

Litterae Humaniores.

The ' humanities ' in easy form should be a part of the educational work of every school. The cruel episodes of the Great War have emphasized their value. Without their ' softening ' influence education may become a danger instead of a blessing ; sharpened wits may be put to criminal uses instead of to the service of the community. Consideration for the rights and feelings of other people, and the humane treatment of dumb creatures are matters that should be impressed on the minds of children at a very early age.

With young children this can best be done by telling interesting stories of people and animals in such a way that the lesson is learnt without any pointing of a moral. " Ulysses " is the world's best fairy tale, and it is only by giving children an abundance of such fairy tales during their tender years that their humanizing influences can have effect. With the older children history and literature will be the usual media ; history, as a record of the objective life of a people, and literature, as a record of its subjective or thought life.

In these days of story books do not let us lose sight of the fact that the Bible is a veritable storehouse of stories suitable for teaching the ' humanities.' Whether the stories are history or parable need not be considered for a moment ; the lesson is there all the same. Something can be learnt from Abraham, Moses, David and Saul, and something from the

Parable of the Good Samaritan. Such lessons will expand the children's ideas in the right direction, and mercy will increasingly tend to supplant cruelty.

The Teacher's Chief Work. Teachers have not infrequently been lauded by statesmen and others as the moulders of the future generations of citizens of this great empire; and although to the thoughtless outsider the eulogy may appear to be very extravagant, to those with an inside knowledge the truth of the laudation is clear. A child is God's greatest gift to its parents; and a child properly trained, and with its nobler innate qualities fully developed, is God's greatest gift to a nation, and thence to all mankind.

The home is the child's first school; at the age of five or six he passes from the parental roof into the larger world of public school, and thence into the still larger world of men. The teacher's chief work is to fit the child to take a worthy place in the larger world of men; and he must keep that aim in view all through the child's school career.

For some subtle reason the teacher has often failed to estimate the capacity and gauge the future possibilities of certain children who have been in his charge. How many men who have made their mark on the history of their country, or have succeeded in the scientific and literary world, were regarded as failures in their school life! This may be due in some cases to later development, but in a far larger number it is due to measuring them by a wrong standard.

Teachers must ever bear in mind that every child is a separate and distinct soul, and that he may

possess gifts capable of indefinite expansion, if he is allowed to express the best that is in him, and in that way to develop it. It is only by giving opportunities for self-expression, and guidance in its operations, that we can hope to ensure human growth and consequent progress. Cast-iron discipline, and repression in its various forms, crush all desire for self-expression and all attempts at self-revelation; they mould the individual according to one set pattern, and train him to walk in one particular rut, both of which conditions are fatal to the production of creative ability or of spontaneous effort. The teacher must in a very large measure 'give the child its head'; he must encourage every form of original expression, he must let the child feel that he is free to experiment, he must aim at helping him to cultivate the very best that is in him, and then the future years will never find him among the 'submerged tenth,' nor in the slum or in the common doss-house.

Let us embrace our opportunities and thank God that they have fallen to our lot.

The Teacher's Example. The saying, "Example is better than precept," is of more importance in an elementary school than in a training college. One chief work of the school is to aid in the formation of good habits, and to prevent the acquirement of bad habits; to make good conduct natural and easy, and to make bad conduct unattractive and distasteful.

The imitative instinct in children is so strong that they follow in the teacher's footsteps often unconsciously; for that reason the general behaviour

and bearing of the teacher will weigh very heavily in the formation of the child's character. If the teacher is patient, self-controlled, kind, and strictly just, the same characteristics will be evident in the conduct of the children. If he is punctual, neat in person, insists upon tidy cupboards and a tidy room; if he is respectful and gentlemanly in speech and manner, and truthful in word and deed, any moral lessons he may give will have full effect upon his pupils, because they will see that he exemplifies the good points himself, and they will have concrete evidence of their value.

Tone. This is a very important element in the life of any school. Many factors enter into it—good manners, proper language, truthfulness, honesty, purity, honour, and consideration for others. The teacher must aim at cultivating all these qualities in his pupils in such a way that the blush of shame will invariably follow any mean act, just as a look of satisfaction and a feeling of delight will accompany any kindly deed.

Children should ever be encouraged to co-operate rather than to compete. The giving of marks or checks for work done, no matter how carefully managed, aids the growth of selfishness, and not seldom leads to conduct that is really immoral. How much better is it to encourage a child to help another over a difficulty rather than keep him in the dark because of 'marks'! Marks for general conduct are not open to the same objection, and are often a valuable aid to discipline.

Children must be led to behave in a generous, kindly, helpful, sympathetic manner towards their

brothers and sisters and playmates, and even towards strangers; and they must be ready to work and even to suffer for the good name of the school. A boy or girl in whom has been cultivated a true sense of honour is an educational product of which any teacher may be proud.

Rewards and Punishments.

There are educationists who would have one big 'drive,' and sweep away rewards and punishments of every kind and form. They would abolish school prizes of every sort, on the ground that even little children can be taught to do what they have to do from a sense of duty, and not because they expect some material reward for it. There are others who would abolish corporal punishment of every kind as being degrading, and dragging the culprit deeper into the mire. But these are the opinions of theorists, and not the facts that face practical teachers.

Rewards and punishments play their part in the lives of every one of us. Most people strive for a higher place in the world because of the reward it brings to them, or the benefit to those who are near and dear to them. And again, there can be no civilized government anywhere unless those in authority have the power to punish the people who break the laws. Nature herself deals kindly with those who keep her laws, and punishes unfailingly those who violate them.

Grown-up people hope for rewards of one kind or another as a result of their labours, and they are frequently kept from doing certain things by fear of the consequences. Why, then, should we expect little children, whose characters are only in process

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of formation, and who cannot grasp the idea that certain things should be done because it is right to do them, and certain others should be avoided because it is wrong to do them—why should we expect them to do their duty in school without hope of reward or fear of punishment?

No sane teacher would advocate the giving of a reward for every little effort, not even in the form of marks; nor would he agree that the prizes should always be carried off by the children with more than average ability, or by those who are healthy and strong, and so are in regular and punctual attendance all the year round; but he would in some way reward effort and progress in whatever direction it be shown.

On the other hand, neither would he advocate the giving of punishment of some kind for every little slip or delinquency. Only a brute would punish a child for what it cannot avoid, either through the faults of its parents, or on account of some physical or mental defect. Punishment should aim at the reform of the offender, and at being a warning to others; if it is in the least vindictive, it is worse than useless.

Children must be taught to do what is right and to avoid what is wrong without always knowing the 'why' and the 'wherefore.' They must be trained to acquire the power of controlling those natural impulses which would lead them to do things they ought not to do; and they must be led to see that right-doing carries with it a worthy reward of some kind, just as wrong-doing receives inevitable punishment.

Children are not Morally Perfect.

Do not expect children to be perfect in their moral conduct. There are certain evil tendencies that are inborn in all children, which, if not carefully dealt with, result in evil actions. A young child has little notion of property rights; he will frequently appropriate anything within his reach that he takes a fancy to—an act which, in his case, can in no sense be looked upon as stealing. He must be taught gradually to control his acquisitive impulses, and then they will be of great value to him in the future in acquiring right and proper things.

Of course, if these impulses are unrestrained, and are allowed to develop abnormally, they will make him a criminal. Sympathy and patience are required by the teacher and by the parent. It must not be forgotten that the power of controlling one's natural impulses is only acquired very slowly, and the period of acquisition varies widely in different children. Every teacher knows that a small percentage of children seems to be born with distinctly criminal tendencies, and that the development of these tendencies is often inevitable owing to a vicious environment. These ought to be separated from normal children and dealt with specially, the chief aim being to strengthen the power of self-control.

Training the Will.

This must be done in the child's earliest years; and one of the first exercises should be to teach him to be obedient. This can be accomplished kindly and gently; then the child will respond to external authority with gradually increasing ease. He will begin to realize that what he is required to do is for his own good as well

as for the good of father and mother. He will also begin to recognize what is good and beneficial in the actions of others, and he will imitate these actions. In this way he will learn to give up objects he desires, or things he wants to do, just for love of father or mother, sister or brother. Later on he will learn in his games to do the same towards his playmates; and later still he will do the same for the public good.

Every encouragement should be given to the child to act rightly; this he will do if he knows that such action carries with it the approval and appreciation of those in authority over him, and especially when he sees that they themselves are always careful to do what is right. In this way the child's will is trained and strengthened, and, if the practice be continued, he will not only *know* what is right, but he will have the power to *do* it.

One sometimes wonders how many of the children who have been born with 'silver spoons' in their mouths have come to grief. It is fairly safe to say that 'silver spoons' have choked far more than they have fed. Everything has been made so smooth and easy and comfortable for the young folk, until the obstacle comes that cannot be flattened out by money or by indulgent parents, and then the wreck follows.

Professor Wm. James says:—

> "Each one of us ought to do at least one thing each day that costs an effort; something we would rather not do, especially in the way of self-sacrifice."

It is only in this way that we can strengthen the will, and ensure moral growth. By overcoming little difficulties we gain strength to overcome greater ones;

by working against certain resistances we grow strong. We develop by exercise—spiritually, morally, mentally, and physically; we degenerate by slackness and neglect.

We must remember these truths in our work as teachers. It is our business to strengthen all that is worthy, and repress all that is unworthy, in those in our charge. We must see to it that they have plenty of opportunities of exercising the will, of doing things which are necessary, though they may not always be to their taste. We should never take the sting out of things by too much preliminary instruction, or too constant help. The normal, healthy child likes to find himself up against a difficulty; the languid and the lazy like to be spoon-fed. The languid ones may need the attention of the School Medical Officer; the lazy ones must be aroused and made to understand that life is a real thing, and that they have their part to play and must fulfil it.

Of course, we ought not to set tasks that are too difficult; there is nothing sacred about hard work as such. There are plenty of real obstacles to face without our creating artificial ones, and we must let our pupils play their part against them before we remove them. Every lesson should demand suitable effort on the part of the child, who should be trained to exercise his will in such a way as shall ensure his doing whatever has to be done in a thorough and efficient way.

Moral Training.

Moral education is of greater importance than either physical or intellectual education, and so the teacher's leading aim should

be the formation of character. Character is made by conduct, and character also makes conduct. The influences we bring to bear upon the children in our charge make either for good or for evil, and aid or retard right or wrong conduct. These influences are in operation all day long; not merely during some particular lesson, but in all lessons.

One of the chief endowments of all children is the power of imitation. A child is largely an imitative creature; sometimes he imitates purposely, at other times he does so almost without knowing it. He will pick up some peculiarity of speech or walk, or some uncommon mannerism, with the utmost ease; and so the teacher first, and class-mates afterwards, are sure to modify a child's character in the direction of the example set. And let us remember that they imitate what we *do* more than what we *say*; with them example is more powerful than precept.

If the teacher is careful always to put before his pupils a sound example in all things, if he aims at cultivating noble ideals, and uses every effort to secure a high moral tone in the class, the development of sterling character is almost sure to follow. Almost, but not quite, because the child himself is a factor in it; and that inborn selfishness, which, if unchecked, leads to lying and cheating, and later on to the loss of all the higher virtues, must always be reckoned with. The best moral teaching finds its true basis in the Christian religion; and other things being equal, the one who cultivates a genuine religious life will always be the most successful teacher of morality.

Power rather than Knowledge.

The cultivation of power is of more importance to the child in the elementary school than the acquisition of knowledge. Education must be judged according to the amount of self-control and self-direction it develops in the child. One of the greatest mistakes some teachers make is that of depreciating the powers of their pupils. "This is the worst class I have ever had!" "I never saw such a duffer in my life!" "Your head is as thick as a doorstep!" "You know nothing, my boy, and never will!" Expressions like these may relieve the teacher's feelings, but as far as the children are concerned they are worse than useless. The opposite method is much more effective. The teacher must lead the children to see that in most things "where there's a will there's a way," and he must help them to find the way.

When a difficulty has to be overcome, the pupil must not be allowed to come to the immediate conclusion that only clever boys or girls can do that. He must be induced to try; he may have to be helped a good deal at first, but when he has overcome obstacles on a few occasions, he will need less help with subsequent ones. In time he will begin to say, "I can do it," instead of "I can't do it," and he will gradually feel an accession of power that will be a great stimulus to success. When a child feels that he can do a thing, he puts his heart and soul into it; if he has been taught to doubt his capacity, he is not likely to accomplish anything worth accomplishing. The cultivation of a strong determination, the acquirement of the energy needed to continue tirelessly the pursuit of a noble purpose, is power of supreme and life-long value.

Scripture Teaching.

Properly taken, the Scripture lesson should be the most profitable, and one of the most enjoyable in the whole curriculum. Sad to say, it is often unplanned, vague, uninteresting, and consequently useless. The laws of psychology and the rules of method are often utterly ignored in teaching this subject, which, from its very character, ought to be taught in the most reverent and careful manner. To be effective, the lessons must be planned on right lines, they must be made interesting, and there must be constant work for the child's imagination.

What a remarkable difference one may often notice between the recital of Tennyson's "Revenge" and that of the 23rd Psalm! In the one case the scenes and incidents are alive and real; in the other there is no more life than there is in the multiplication table. The Lord's Prayer is as unintelligently said by many children. "Are Father we chart in Heaven," may often be heard, and this means that it is sometimes repeated irreverently, for irreverence in children is always due to ignorance. If Scripture is worth teaching—and it is—it is worth doing well. A successful lesson will stimulate the minds of the children, arouse and direct their thoughts, and lead them to some desirable end.

There are people who object to religious teaching of any kind in the elementary schools; but, with few exceptions, they are not the teachers, nor the parents of the children.

Religion is, without question, the best and surest foundation for morality either in child or adult; it is therefore a necessary element of all true education. The teacher's aim should be to train his children to

grow up into honourable citizens who will respect one another, and will work together for the common good, notwithstanding differences of religious belief. Practically all Christians are agreed upon those principles which bind men together under the Fatherhood of God and the Brotherhood of Christ. If the basis of our teaching be, "Love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind, and thy neighbour as thyself," there will be no room for disagreement. Other details that divide people into sects, need not trouble us.

Moral Education, vitally Important.

If the Great War has stamped one thing upon our memory more indelibly than another, it is the fact that "Knowledge is power to do evil, as well as to do good."

Germany has taught us the tragedy of a misdirected education. For years Germany was the educationists' Mecca. People in this country had been filled with high hopes; they had been led to expect splendid achievements in other realms than the commercial and industrial, when the effect of universal education began to make itself felt. But, instead of the splendid uplift and the spread of those humanizing influences which one had a right to expect from the best educated people in Europe, they plunged the world into the most fearful cauldron of history; they created an avalanche of horrors that nearly overwhelmed modern civilization, and almost succeeded in plunging it back into the abyss of barbarism.

What is the explanation of it? Germany flung aside the law of the moral life as so much useless

lumber. With lofty scorn she refused to 'play the game.' She taught her citizens that 'Might is Right,' and that the State is above all law and can do no wrong, a doctrine far more infamous than that of the 'Divine Right of Kings.' The result is now seen. She herself has passed through the terrible experience of seeing her sons die by the hundred thousand, and of witnessing the gains of centuries swept away in the tornado of war; and the rest of the world lies bruised and bleeding.

The lesson we have to learn from her fearful mistake is that we must, more than ever we have done before, lead the rising generation to strive and struggle to reach the higher moral levels of honour and virtue.

> "When the good man ceases trying,
> The world drops back like lead."

"From him that hath not shall be taken away even that which he hath," said the Divine Teacher. From him that hath not the higher virtues and the nobler qualities, and makes no effort to attain them, shall be taken away even the lower virtues, and less valuable qualities, which he now possesses. There is no stagnation in human life; men and nations are either advancing or receding, either reaching upwards towards the higher morality, or sliding downwards to degeneracy and extinction.

Germany has proved to us that moral progress is the only true progress; and so our work as teachers must be more than ever directed towards keeping the moral powers of our young people in line with their intellectual development and scientific attainment. With the example of Germany before us, we cannot, without a feeling of alarm, sit down for

five minutes and seriously ponder over what may happen in Britain during the next twenty-five years, if we sharpen the wits of our young people up to the age of eighteen by means of organized education, and then leave them to their own devices. We must inculcate positive ideals by means of definite moral and religious teaching and training, and endeavour to keep evil from their minds by occupying them with thoughts that are good, and worthy, and noble.

We of larger growth know some of the moral pitfalls that children are sure to meet with on their way to manhood or womanhood; we know also that those who have imbibed a spirit of truthfulness, honour, sympathy, loyalty, love, courage, devotion, and perseverance, are not likely to become victims of drink, gambling, dishonesty, lust, lying, laziness, vacillation, fear, and anarchy. We must lead them along the paths of wisdom and virtue, and then they will learn to respond to the ideal; they will use their powers for good and not for evil, and, following "the gleam," they will endure hardship gladly for righteousness' sake.

Opportunities for giving rise to pure and healthy thoughts, and of influencing character in the right direction, occur in nearly every lesson, and particularly in those on literature and history. The Scripture lesson, if rightly and reverently taken, is of supreme value. The Bible is a storehouse of wonderful stories specially suitable for moral teaching; and I am convinced, after years of practice, that the Story in its various forms is the teacher's best instrument. Two fifteen-minute lessons a week for the younger children, and one half-hour lesson for the older ones, will suffice. Mr. F. J. Gould's

books contain excellent material for the teaching of young children; the older boys and girls will be able to take more solid food in the form of the heroic and the biographical. All such lessons must be made so interesting that children will eagerly look forward to them. Stories of right and wrong must be told in so impressive a way that the rightness of right and the wrongness of wrong leave an indelible mark upon the memory, and create an eager desire in the minds of the children to follow the one and avoid the other. No moral should ever be pointed out; it is a childish instinct to love a story and hate a moral. A story or biography that does not contain its own moral, should never be chosen. Here also it should be said that formal moral lessons on subjects such as honesty, truthfulness, gratitude, and the like, are useless.

The teacher must aim not only at giving moral ideas, but at generating motive control. Many children are like their elders; they *know* what is right, but lack the power to *do* it. The teacher must train them to acquire that power, by finding opportunities for them to exercise it in some such way as Boy Scouts have to exercise theirs, by doing one kind action for somebody each day.

By such work on the part of the pupil, and by example and precept on the part of the teacher, much may be accomplished. Dean Inge says, "Christianity is something that people catch like the measles from somebody else who has it;" and certainly a good example is the greatest incentive to right doing. If we sow the seed and show exemplary fruit in our own lives, we shall command success. Some of the seed will doubtless fall upon

the thorny, stony, shallow ground, and come to nothing; but some will also fall upon the good ground, and will probably bring forth fruit a hundredfold. Herein is our great reward.

Leading *v.* Driving.

A horse may be taken down to the pond, but no driver can compel him to drink. Similarly, a teacher may gather his children into a classroom, but he cannot compel them to learn. Many teachers who have missed their vocation try to do it; those who have a natural penchant for teaching never attempt it. By the exercise of skill, tact, and patience, they endeavour to *lead* their pupils to drink at the fount of knowledge rather than to *drive* them to it; and the two magnets they employ are "interest" and "pleasure."

No dead wood and no dry bones are allowed to strew their path. Arithmetic is associated with everyday life; composition deals with live subjects; history of times past is linked up to, and compared and contrasted with, the history that is being made to-day; geography and nature-study are dealt with mainly in the fields, lanes, woods, and valleys, on the hills and river-banks; singing, physical exercises, and games are, whenever possible, taken out-of-doors, and are interspersed with the harder lessons; hobbies are encouraged and the teacher takes an interest in them; and visits to factories, mills, and places of local historic importance are periodically arranged. Where these things are done, 'driving' is never needed; the children are eager to be 'led.'

Memory Training.

Can the memory be trained? Pelmanism says "YES," in capital letters. The person who has a good memory must have

the power to acquire knowledge as well as to retain it. As a result of extensive and exhaustive experiments, psychologists are of opinion that the memory can be trained. It seems to be the rule that children have lower powers of acquisition and higher powers of retention than adults. A child can learn by heart something he does not understand ; an adult cannot, at least not without unusual effort. In the child the power to acquire increases from the age of eleven onwards, but his power to retain what he has learnt probably decreases in a similar proportion.

All experiments go to show that memory is very much improved by frequent practice with suitable memory exercises. This holds good for adults as well as for children, though in the case of adults the exercises are of use in preventing or retarding natural decline due to advancing years rather than in giving increased power. Not only does training increase the power of memory as regards the kind of material used in the special exercises, but it gives a general increase of power. It must not be forgotten that all children do not memorize in the same way. Some learn mainly through the eye, others through the ear, many through both. This being so, when memorizing is done there should be opportunity to use the eyes and ears, to write and to repeat. Forty-five consecutive minutes spent in memorizing are not nearly as effective as three separate periods of fifteen minutes each. The spaces between give the brain time to absorb what has been learnt, and when once absorbed the matter is easily recalled.

Training needed, not Cramming.

Children must be trained to be intelligent, and to think clearly and logically, rather than be crammed with facts. The teacher who has so much to get through and means to get through it, hurls facts at the children all through the lesson and expects them to be remembered—an expectation that is never realized. Even if such facts are accepted for the moment they are not properly assimilated, and all knowledge of them soon disappears. This is not the natural way of doing things. Nature goes carefully and kindly about her work, is never hurried, but is never lazy; sometimes slow, but always sure.

Children in school must be active rather than passive; doing a little here and a little there; talking, questioning, seeing, handling; gaining knowledge first in this way and then in that way, at the right time and when they are ready for it; discovering the value of personal and independent effort, and becoming real learners rather than mere listeners. This is the way to lay the foundations of thoughtful, industrious citizenship. By this method, knowledge acquired will be transformed into driving power rather than remain as a constantly diminishing cargo.

Nerve-strain in Children.

City children are much more liable to nerve-strain than those who live in the country. Life for them is always in full swing, and is ever bringing new experiences. Their environment at home and at school is so crowded with objects and events that it requires great effort on the part of any child to adjust himself to the changing circumstances. Nervous energy is being expended in so many directions that it is little

wonder that the less robust occasionally have a breakdown.

The teacher must consider seriously what methods he can adopt to minimize this evil. It can be done only by studying the temperament of the child, obtaining all the information he can regarding its home life and general circumstances, and then doing his best to adapt its school life to its common life. 'Sweet reasonableness' must enter into all the teacher's school demands, and he must be able to judge when the limit is reached in the case of each child in his class. Impositions after school hours, keeping-in during time for recreation, punishment for apparent carelessness or stupidity—both of which may be beyond the child's control—and the giving of home lessons, should be rare exceptions rather than the rule. By sympathy and insight the teacher can do a great deal towards preventing undue nerve-strain among the children in his charge.

To Cure Bad Children.

The proper way to get rid of any undesirable habit in a child is not to lecture him about it, or to give punishment for it, but to inspire him to act in the opposite direction. If a child is selfish, we must show him the beauty of giving up for the sake of others, and we must do it ourselves as an example. If a child has a tendency to appropriate the playthings belonging to his playmates, we must teach him to value his own playthings, and from that lead him to see how other children value theirs, and so arouse sympathy for their loss.

One of the unpardonable sins is to ascribe wrong motives to children, or to put the worst interpreta-

tion on what they do. Children often do things thoughtlessly, impulsively, ignorantly, or quite innocently, and often they should be excused where adults could not possibly be excused on the same grounds. To keep the lower nature in subjection there must be frequent appeals to the higher nature. By a constant "Thou shalt not," we are appealing to the lower nature through the power of suggestion, and in so doing we are bringing it into a prominent position. We must keep the evil out of sight and out of mind, and see to it that the good is ever kept in the foreground.

Dull Children. In every school there will be found from five to ten per cent of children who are really dull and one or two per cent who are mentally deficient. The only method with the latter is to transfer them to the schools specially provided for their treatment; the elementary school teacher has neither the time nor the opportunity, nor has he had the special training necessary, to deal with such cases. But the dull children fall within his province. They are always of two classes, and these must be carefully distinguished, as each class calls for different treatment.

There is the child whose dullness is due to parental neglect, malnutrition, and unhealthy environment. He is usually thin and pale, and has an appearance of arrested development. The School Medical Officer and the Local Education Authority must deal with him before the teacher can do anything. His mental powers are stunted by his physical condition; when that condition is improved his intelligence will have an opportunity to develop, and the teacher will then be able to classify him as normal.

But there is another class whose dullness is natural, and as far as reading, spelling, and arithmetic are concerned the teacher feels inclined to write them down as hopeless. These are the children who remain in the same standard two or three years, and never get beyond standard three or four. They never will be able to master the ordinary school subjects, but they can be made useful working members of the community.

The best method of dealing with them is to gather them all together into one class at about the age of eleven, and put them in charge of a special teacher who will study them individually. He will find out what there is in the scheme of things that they are likely to be able to do—in nine cases out of ten it will be some form of handwork—and then he can aim at their development mainly along this line. Individual treatment is what they need, and this method has been tried with very satisfactory results. It succeeds in making children who would probably help to swell the ranks of the unemployables and the criminals into industrious workers and useful citizens.

The Problem of Leisure Time.

When the working day is reduced to eight, or, as seems quite probable, even to fewer hours, one of the great questions of the future will be :—" What are people to do with their spare time ? " And the teachers in the schools will be largely responsible for the way in which the question is answered.

No doubt the goal in the mind of the Board of Education is the usefulness of the individual to the community. That is the utilitarian side of it. But there is another side to education, there is the ethical

side. It is equally important to the well-being of the nation that young people should be trained to spend their leisure time in an enjoyable and profitable way. It is fundamental that education should put every child in the way of earning a living by methods most suitable to his physical and mental capacity; it is equally important that he should know how to amuse himself in a worthy and rational way.

If the teacher keeps this object in view, he will hold in check all the undesirable tendencies of the child, while exerting all his power to foster and develop his better instincts and saner interests. These will nearly always lie along the pathway of music, art, literature, and nature study. If the teacher can use the component materials of any one of these subjects in such a way as to lay the foundations of a life-long interest, he will have accomplished a valuable and important piece of work, both for the individual himself and for the community in which he lives.

To Cultivate Taste.

An important part of the teacher's work is to cultivate the artistic powers of the children so that they will not be content with the drab squalor of the slums. The dirty court, the ugly street, the grimy dwelling, and untidy personal appearance must be made abhorrent to them. This is not easy to accomplish when the home and local environment is one of dull monotony and sordid poverty; but the effort can be made to give children as they grow up a 'divine discontent' with things as they are, when those things belong to the slum type.

A great deal can be done by rambles into the adjacent country where the teacher can point out the beauties of flower and field and hedgerow; by visits to museums and art galleries, where they are available; and inside the school by special care with its general appearance. Good framed pictures on the walls, coloured picture postcards mounted, class albums of pictures, plants and flowers tastefully arranged on the tables and window-ledges, constant effort to secure cleanliness and tidiness of person in each child, and scrupulous care about the general appearance of the room—all these things are calculated to cultivate the artistic tastes and raise the general standard of home life. The work connected with the selection and arrangement of material and the neat appearance of the room must be done by the children under the teacher's guidance; and in that way the child's school education, apart from all technical acquirements, will be a powerful moulder of its future life.

A Love of the Beautiful.

As teachers, we must not allow the commercial spirit of the age to absorb all our time and thought, either in school or out of it. In school our main endeavour must *not* be to produce workers who can earn more money for themselves or for their employers, but to produce well-trained citizens with well-balanced minds, who have a sufficient love for the good, the beautiful, and the true, to enable them to spend their leisure time with profit and joy to themselves and to their relatives and associates, as well as to earn their living.

We may not succeed in turning out all our chil-

dren with the ability to work problems or always to spell correctly; but if we can turn them out with a sure foundation upon which honourable character and social usefulness may be built, with the power to steer themselves through life without coming to grief, so that, at the close, they may have the joy of looking back upon an untarnished record, then we shall have done something worth living for, worth working for, and even worth dying for.

One important duty is to create in children a love of the beautiful. Their school surroundings must be made as attractive as possible. If in their most impressionable years they form a love for the beautiful in nature and in art, it will grow and fructify in later years. Rooms ought to be large, light, lofty, and open to the sunlight. The interior should be tastefully decorated, and pleasingly arranged; plants and flowers should have their place, and coloured reproductions of the best pictures should adorn the walls. The contemplation of such a room day after day has a powerful effect upon character. The poorer the district the more urgent is the need. We must make children discontented with things that are tawdry; we must give them a distaste for their sordid slum surroundings; only by so doing can we hope to achieve a better social state in the days that are to come.

The Habit of Attention.

Habit may be described as mechanical action. It is a tendency, formed by repetition, to think, feel, or act in a certain way under certain circumstances. Child-nature seeks constant change; the young mind flits from one object to another, sometimes with lightning

rapidity; the focus of consciousness is being frequently transferred from one point to another.

One of the first things the teacher has to do—and it has to be done in a gentle, kindly way—is to bring mind-wandering under control. This can only be done, in the early stages, by making lessons sufficiently brief and interesting to counteract the natural inclination to mind-wandering. The child's effort to attend, that is, to keep its mind following one particular direction, will only be maintained so long as the one object before it is more attractive than another. Its first attempts at self-control in this direction will be brief, but will grow longer with each effort. Care must be taken to avoid distractions, as nothing interferes more with the formation of the habit of attention than frequent lapses into inattention during the time when attention is being exercised. With repeated effort there will come an increasing power, and a facility to act; and then the habit of attention will have been acquired.

Subconsciousness. The paper and pen on which and with which I am writing this note form the centre or focus of my consciousness for the moment. But there are other things in the immediate vicinity that I see subconsciously; by that I mean they are on the margin of my consciousness. It would be quite easy for me to transfer my attention from this page to the vase of flowers in front of me; then that would be in the focus of my consciousness, and this paper would recede into the fringe of consciousness, or into subconsciousness.

And so it is in our school lessons. Children cannot focus their attention on any one object without

having other things lurking on the borders of consciousness, and some change in the conditions at once transfers the focus from one thing to another. The knowledge that this is so should teach us to be careful as to what is in the range of subconsciousness. During lessons requiring concentration, distracting elements must be removed, and sufficient interest must be aroused and maintained to keep in the focus of consciousness whatever for the time being has to be taught and studied.

To Keep Attention. The teacher must not only arouse the attention of his pupils; he must know how to keep it. Most cases of inattention to the work in hand are due to certain trains of thought aroused by recent experiences, or connected with future projects. If a class has been having an interesting story lesson, it is not easy for the children to break away from the alluring pictures of the imagination that have been formed, and concentrate on something that requires serious thought. This difficulty can be obviated in a large measure by taking the lighter and more interesting subjects near the close of the morning or afternoon session.

Children naturally attend to whatever appeals to them most. Of course, as a child grows older he gains power in resisting interesting side-issues, and in concentrating upon some desired object. But it is next to impossible for the young child to believe that dull, drab things are of any importance; hence the teacher's difficulty in maintaining attention on certain subjects.

Before the lesson begins the teacher must take care that, as far as possible, all sources of distraction

are removed. Loud talking outside the room, teachers and children from other classes coming into the room, noises of various kinds, anything which starts a new train of thought, must be avoided.

Then again, the teacher must be in such a position that no child is able to hide himself behind another. Experienced teachers know well enough that when they cannot catch the child's eye they have no hold on its owner; and when that happens attention is almost certain to wander elsewhere.

Again, it is inadvisable to let bosom chums sit together in class; if there is the ghost of a chance they are almost sure to be turning over recent experiences, and to be hatching new plots; even the near presence of each other will give rise to trains of thought foreign to the subject in hand.

If these distractions are avoided, and the teacher makes the lesson as interesting as the subject permits, and if in its delivery he makes suitable use of voice and action, he will have very little difficulty in retaining attention all through the lesson.

Concentration. The power of steady application and the ability to concentrate one's thoughts on a particular subject at a particular time are absolutely necessary to the success of any serious student. But care must be taken not to force, nor to expect, this power too early in a child's school career.

One fears that there are still time-tables in use where the length of lessons is the same for children in the lowest classes as for those in the highest. Medical men to-day are of opinion that, as a general rule, it is inadvisable for a child to take up serious

school work of any kind before the age of six. Very early schooling may be a serious danger. Every student of child-nature knows that the young brain delights in activity; the child's attention should as far as possible be allowed to wander whither it will, and ever find "fresh woods and pastures new." To compel a young child of five or six to fix his attention on some particular subject for a period even of fifteen or twenty minutes, or to sit quite still for the same length of time and listen to the teacher, is often a useless, and possibly a dangerous, experiment; it is calculated to retard rather than to promote mental development.

Having said this, one should also say that the Montessori System, admirable as it is for the youngest children, is not without objection for the older ones. No doubt it is a legitimate use of *camouflage* to induce children to think they are playing, while really they are learning; but, if it be continued too long, there will in later years be a lack of earnest purpose that may prove harmful. Moreover, the System, by allowing the child to flit at will from one thing to another, tends to retard his power of concentration upon things *not* chosen by himself; and the constant use of apparatus tends to an equally constant need for 'crutches.' There is also a danger of giving young children an impression that being able to choose this pleasant thing and reject the other unpleasant thing is the rule of life. Those who get that impression are in for a bad time later on. It is advisable to train even little children to face and overcome necessary difficulties, distasteful though they may at first seem to be. Once they have enjoyed the sweets of conquest, they will be anxious to climb

steeper heights; then, as time goes on, they will be prepared to meet and overcome the problems of an exacting and busy life.

Interest. Interest is the most important article in the teacher's tool chest. Can he put life into a dull subject? Can he make commonplace things interesting? If he can, his future is assured. We have all noticed the different degrees of ability to interest in different preachers we have heard, and in the conversation of different people we have met. Some people are interesting without effort and without knowing it; others are equally as dull without knowing it.

To be interesting, a teacher must overcome everything in the way of 'nerves.' If he is self-conscious, or if his thoughts are wandering to Mr. So-and-so —who may be in the room—wondering what his opinion of the matter in hand may be, he will never retain the interest of his pupils. If he knows his subject thoroughly, and has the power to express his thoughts readily and clearly, he has nothing to fear. Confidence in one's own powers is the first essential for all effective speakers and teachers. Of course, some people are confident they can do things when they cannot; that is a kind of confidence best described by the word 'conceit.' But it is not conceit in the man who knows, and knows that he knows.

Gesture, too, is an important factor in arousing and maintaining interest. The teacher who can make his hands and feet and face and body 'talk' is always able to hold the interest of his hearers.

It is also necessary to acquire a good vocabulary.

To hit upon the right word or phrase at the right moment is of the utmost value. To do this the teacher must read widely, and make frequent use of happy words and phrases he meets with in his reading; and he must have constant practice.

The voice, too, must be under perfect control. A musical voice of good compass and well trained is an enviable possession; it can be used with variations of light and shade with splendid effect.

The teacher who strives to be confident, to cultivate suitable gesture, to acquire a good vocabulary, a flexible voice, and a pleasant manner, will have no difficulty in arousing interest and in keeping it.

The Power of Interest. A casual acquaintance with child study tells anyone how deeply interested children are in things that have ceased to interest adults, how lively is their imagination and how excited they are over apparently trivial matters. Their senses, especially those of sight and touch, are in active and constant use. Home, street, playground, park, city, picture house, are full of wonder and interest to them; and through contact with these things they acquire a fund of knowledge of great importance.

What a change when the young child is translated to the ordinary school, that is, if it be one of the old-fashioned type! There his chief work is to listen and sit still, be a good little boy and never say 'mum,' unless he is spoken to. Where this prevails the stunting process operates from the very beginning of his school life, and his progress in the various subjects is largely in spite of, not on account of, the methods adopted.

Education should proceed through a child's interests and activities; that is the only method by which he can be adequately trained, and through which his knowledge can become permanent. It is a sound law of education to make use of a child's natural powers as soon as they show themselves. Wonder appears very early, and then arises the desire to see fresh things. The constructive instinct is seen soon afterwards, and then the child must be using his fingers and making things. Later, in most children, curiosity appears, and they want to know 'why?'

If these powers are put into proper channels at the proper time, they will be a great help to the teacher, and of the utmost value to the child. If they are misused, or suppressed till a later stage, irreparable harm may be done.

When the child is interested and is allowed to do things, or to express himself by action, the teacher's work becomes easy and pleasant. If his natural curiosity, his love of wanting to know, his eternal 'why?' be properly utilized, they will prove of inestimable worth both during school life and in that which is to follow.

We have all noted the cleverness of the advertiser who rents a portion of space on a hoarding, and simply prints in the middle of it, "Keep your eye on this spot"; or who uses the sandwich-man, and on his front board puts, "Don't look at my back"; where, of course, the advertisement is prominently set forth. He knows how to excite curiosity!

The teacher who can do this may be written down a success. It will not be the teacher who is always talking and explaining and smoothing away every

difficulty immediately it crops up ; nor he who gives the premisses, carries out all the experiments, and draws the conclusions. It will be he who knows that a child is most interested in what he is doing himself ; he who brings out his specimens one at a time with a certain amount of mystery ; he who allows the children to do the work while he himself superintends and gives aid where it is needed ; and he who links up the material of his lessons with what is already an interesting section of the pupil's own knowledge.

How to Play.

Organized games are now a regular feature in most schools. If the supervision is what it should be, the organized game is not ' play ' for the teacher ; it is very hard work. If all points are to be watched he must be on the *qui vive* every moment. The teacher who does this, and puts his heart and soul into the work, is doing no small share towards the development of sterling character in those children in his charge.

To teach boys to take part in, and watch, a game of cricket after the manner of true sportsmen is valuable disciplinary work. When a boy is given out l.b.w. in the first over, and is sufficiently self-controlled to take the umpire's verdict without demur, put his bat under his arm and walk quietly out, he is on the right way to make a worthy man. When, without being prompted, he can applaud smart work on the part of the opposing side, he has a good idea of fairness. When he can plod bravely on against a big score piled up by his opponents, or ' stick it ' when he knows the game is lost, he is developing that sort of pluck of which Britishers are proud.

Swimming for boys and girls, football for boys, and net-ball for girls, can be used to the same purpose.

In football the principal muscles of the body are developed; at the same time players have to be quick to discern weak places in an opponent's defence; individual effort and co-operation are in constant action, while resourcefulness and self-control are receiving continual practice. To receive a kick on the shins with a smile, and to recognize that it was done quite accidentally show the possession of a valuable power of self-control.

Qualities such as these, taught on the playing fields, will be of great value all through life.

Action necessary.

One of the most painful experiences of the true teacher is to see a class of young children frequently sitting bolt upright, with hands behind or arms folded, and doing nothing but trying to listen to the teacher's ever-flowing stream of words. Some schools remind one of a Public Reference Library, where 'silence' is the word, and 'book' is the be-all and end-all of things. A school should be more like a workshop than a Reference Library. One of the outstanding features of child life is activity. Little children especially are all alive and full of energy, and to keep them sitting still for any length of time when their fingers are itching to be employed is a form of torture. They should be given something to do as often as possible, for they will learn more by 'doing' than by all the talking the teacher can inflict upon them.

The Value of Things in Teaching. The best, and, in reality, the only true, educative instrument is experience. A child learns to walk by doing it; it gains its knowledge of things by acting upon them; and for a child there is no other way. The younger the children, the more must objects be used in their education. This does not mean that books must be thrown aside or neglected, but that they must be used at the proper time and in the proper place. The young child's hands should have almost constant employment in school as an outlet for its natural activity. Making dolls' furniture in paper, toys of various kinds, and certain objects in clay or other plastic materials, affords most interest, and is therefore of considerable value. If what the children do involves a certain amount of mental effort as well as manual exercise, it is of still greater benefit.

As education proceeds, books come into use; it is through them that children, and older people, too, benefit by the knowledge, experience, and wisdom of others. Books widen their outlook and enlarge their environment, and, when rightly chosen and properly used, they are of the greatest value.

Natural Activity. Every ordinary child in normal health displays a considerable amount of activity. It wants to know, and it wants to do. Its questions are legion, and its activities are often embarrassing. How it chafes under the teacher's history 'lecture'; how its fingers are itching to do something, so much so that it must take that knife out of its pocket and examine it once again!

Knowledge of these facts should make it plain

to any teacher that his measure of success will be in proportion to the extent to which he utilizes these natural gifts of inquisitiveness and activity. Dull days must be lightened and dull lessons relieved by the exercise of these gifts. A good story told by the teacher, or five minutes' brisk singing, will do much to remove the listlessness caused by the weather. Permission to ask the teacher questions or to illustrate by a rough sketch some feature that occurs in a lesson will go far to relieve the tedium of a rather dry subject.

In these ways the tired mind will be rested, the apparently indifferent child will be aroused, and the lively ones will be provided with an outlet for their pent-up energies.

Wonder. We ought to make the best use of that natural instinct of wonder which is found in every child, because that is the source of the 'desire to know.' To have to teach children who never want to know anything on their own initiative, but are always content with what the teacher says and provides for them, is drudgery of the worst kind. Wherever this obtains it is due to repression in the home or in school under the sacred name of discipline; and then education becomes mere mechanical instruction.

The child's natural curiosity should be watched and utilized in every possible way. Excursions into the region of wonderland may not make the children more efficient workmen in later years; they may not satisfy the commercialism of the age which tends to drag everything down to one drab level; but they will give children far brighter and happier

views of life than those provided by tall smoky chimneys and ugly-looking factories.

Fairy tales, romances, and dreamland are part of every child's natural inheritance, and they may be used to lead him to an admiration and love of the good and the beautiful, which will be an incalculable boon to the child himself as he grows older, and will add to the general happiness of the community.

To Exercise the Powers of Observation.

An occasional exercise given to test the extent and accuracy of the children's powers of observation will be found both helpful and interesting. Grown-up people as well as children seem at times to go about with their eyes shut; for not infrequently they cannot tell the name of a street they pass nearly every day. The following exercises will suggest others :—

(1) Place about twenty small objects on a tray; allow children time to look at them, then remove the tray and let the children write down the names of all those they can think of.
(2) How many window panes are there in the Hall ?
(3) Write down the names of all the pictures in the Hall.
(4) Name the kinds of shops and proprietors on one side of a neighbouring street.
(5) Name the streets in order between any two given points.
(6) How many ribs are there in an umbrella, and how many spokes in a cart wheel ?
(7) Name the tram-car stopping places along a certain road.

Such exercises as these will train the children to use their eyes and keep their wits about them.

Lesson Illustrations. Where a school possesses a central hall, its walls and show-cases may be divided into sections and used as illustrative of history, geography, and nature-study lessons.

In the history section, there should be large time-charts on the wall, and, in other places, smaller ones such as are given to the children; maps, plans of battles, diagrams, drawings, pictures, portraits, specimens, and models of historical implements; reprints of historical documents, and objects illustrating local history.

The geography section should contain maps, plans, models, graphs of wind and weather, and of thermometric and barometric readings, specimens of rocks, minerals, animal and vegetable productions, and pictures of various kinds.

The nature-study section should contain specimens of all things talked about in the nature-study lessons; sketches, diagrams, pictures, and anything concrete that is calculated to invigorate and influence the imagination, arouse the interest, and develop the intelligence of the children, and so make the lessons real and effective, and consequently permanent in their results.

Physical and Mental Fatigue. Many teachers have the idea that the best remedy for mental fatigue is a good dose of physical exercises. There can be no objection to a few arm movements for two or three minutes between change of lessons; but, from a health point of view, a half-hour's vigorous

physical exercise after two hours' mental strain may cause serious injury.

Medical men tell us that fatigue is caused by the presence in the body of an excessive quantity of poisonous waste products formed during the expenditure of energy ; and whether that energy be physical or mental makes no difference to the result. This means that fatigue caused by mental work and that caused by physical labour or exercise are alike in their effects ; and that being so, a dose of physical exercises can be no cure for mental strain. This explains why it is that busy, hard-worked, harassed people, who make their holidays a toil of a pleasure in sight-seeing and amusement, return home in a limper condition than when they went away.

And so we learn that children who are physically fatigued by employment out of school hours cannot possibly use their school time to the best advantage ; and that when a child is mentally fatigued no further progress is made with his lessons. The only remedies for physical and mental fatigue are complete change and rest.

Learn by Thinking.

The school motto of the day is " Learn by Doing," and an admirable motto it is ; but we must see to it that it means more than appears on the surface. It is quite possible for a child to be ' doing ' without thinking about what he is doing. There are many cases where the teacher does the ' thinking,' and the child the ' doing.' This often happens when a problem in arithmetic, a drawing to scale, a design, or a cardboard model is given. The teacher takes the sting out of the problem, and does the other things a bit at a time

on the blackboard, and the children imitate him step by step. Even in composition such an elaborate outline is given by the teacher that no room is left for independent thought on the part of the pupil. Children will spell words or repeat tables time after time without giving a moment's serious thought to what they are doing.

All this 'doing' without thinking is of very little value; therefore the teacher must train children to cultivate the habit of thinking about what they are doing. To accomplish this he must always leave them some part of the work to do which cannot be done without thinking about it. If this habit is formed, it will improve the child's work in after-school life. Moreover it will have its effect upon his character; for he will think before he acts; he will weigh the pros and cons of a certain line of conduct before entering upon it—a habit which may save him from much evil-doing because of the foreseen consequences to himself and others, and one that will at the same time lead to his appreciation of the good, both for its beneficial effects and because it is good.

A School Memento.

Our boys and girls are constantly moving up the school and passing out into the great world. Teachers bid farewell to most of their children with feelings of real regret. Some return on occasional holidays to see how the old place looks; but as new faces take the places of the old ones, former scholars are finally swallowed up in the busy life of the world, and the school knows them no more.

As a memento of school days teachers might keep an album, one for each year, and encourage children

to bring a small photograph of themselves a short time before leaving. This can be pasted in the book, and the child who brings it should be asked to write his or her name, age, address, and present date by the side of it. The teacher will find these books an interesting and valuable memento of former days, one which increases in value as the years roll by.

The Cinematograph in School.

In the best schools the lantern is an old friend, and has proved a valuable help, particularly in geography and history lessons. In the coming days it will be supplemented by the cinematograph. With this instrument it is possible for the children to study the habits and actions of birds, beasts, and insects, as they may be seen in their own far-away native lands of Africa, America, India, or Australia. Subjects that have often been dusty and dry will become of enchanting interest.

Educational films of many kinds may now be obtained. Even forms of life of microscopic minuteness can be seen in their various stages of transformation and development. More accurate knowledge can thus be obtained in a delightfully interesting way in one-tenth the time needed by book-study and ordinary class lessons. Cheaper machines and non-inflammable films may be looked for in the near future, and then all teachers should see to it that this invaluable ally is brought into constant use; when this is done, blackboard sketches and expensive models will be rarely needed. Science, natural history, geography, history, industries in action, processes of all kinds can be taught with interest and profit, and at a great saving of time and labour.

The Curriculum. Do not be misled by any specious suggestions that fewer subjects should be taught in elementary schools, and that it is better to teach a few things thoroughly rather than to give a smattering of many things. This plea sounds well, but it is one of those half-truths that easily catch the unwary.

Sir Oliver Lodge, speaking on this subject to the students of Birmingham University some time ago, said :—

> "It is a great mistake to hammer things into a child until he has got them 'thoroughly,' as some schoolmasters call it. Thoroughness in the true sense is simply impossible. Those who advocate the crippling of elementary schools and the limitation of subjects to the three R's only, really advocate the lowering of national intelligence and capacity. A variety of subjects develops the faculties and quickens the intelligence, and, moreover, develops a taste for future study, rather than a dislike of its dreary monotony. I do not wish to be misunderstood as having said anything against 'thoroughness' in its true place and time. Unless a man knows what thoroughness is in some one subject he is not really educated ; but it is precisely with the object of enabling him to be 'thorough' in one subject that I would have him acquainted with many."

We have no business to expect a child in an elementary school to be perfect in any subject, not even in arithmetic. The fetish of unerring accuracy in the three R's has held sway too long, and teachers themselves are largely to blame for pandering to the standard by which their work has often been

measured. It has meant the wearisome repetition of uninteresting things in the hope of stringing children up to a certain pitch of attainment, from which they naturally begin to slide immediately the pressure is removed. Accuracy must always be the aim; but with children it can never be unfailingly reliable, and with adolescents only after years of practice in the particular subject in which unerring accuracy is of prime importance. The elementary school is the place for laying broad foundations only; the place where the child should be taught to take an interested and intelligent view of his general environment. In doing this many things will be taught that have no cash value in the commercial market, but they will be the means of bringing joy and enlightenment to the mind, which will be of far more value than great riches.

Arrangement of the Time-Table.

The teacher who has to construct a time-table should know something about the fatigue-power of the various subjects that are found in the curriculum. We are all aware that a lesson taken by one teacher soon becomes dull and fatiguing, while in the hands of another it is enjoyable, and fatigue is apparently absent. But apart from this it should be known that mathematics, grammar, dictation, spelling, and reading (with concentration) are the most fatiguing, while experimental science, nature-study, writing, drawing, and singing cause little fatigue.

When the child is alert and fresh, that is, of course, in the early part of the morning session, the fatiguing subjects should be taken, and the less fatiguing ones during the afternoon session. The length of lesson

also should vary, not only according to the ages of the pupils, but according to the time of day and the fatigue-producing power of the subject.

Teachers should also seek to obtain more liberty in making their time-tables, and more elasticity in using them. The word 'English' should be sufficient to cover all the English subjects—reading, composition, grammar, spelling, and literature—and the word 'Mathematics' should embrace arithmetic—both theoretical and practical,—mensuration, geometry, mechanics, and algebra, where these are taken. This gives the teacher the opportunity of concentrating upon any section that needs it, and each section will need it when entirely new work is being done. If a teacher is at liberty to concentrate upon a subject or theme for a number of lessons which follow one another at short intervals, it will have a far greater effect than just touching a subject twice a week through the whole term. In the upper classes, one hand-writing or copy-book lesson per week is usually indicated on the approved time-table. How much more effective it is to take four or five lessons in one and the same week when the writing shows deterioration, every teacher knows who has tried it.

The time-table must be regarded as a guide, not as a law of the Medes and Persians, and then instead of being a hindrance it will be a help. "The letter killeth, but the spirit maketh alive."

Length of Lessons. Length of lessons must depend upon the time during which children are capable of giving effective attention to one particular subject. This, as will be expected, varies

largely with different children, and according to the time of day and the kind of lesson being given; but the best medical opinion gives the following as the average :—

Ages 5	to 7	.. ..	15	minutes.
„ 7	„ 10	.. ..	20	„
„ 10	„ 12	.. ..	25	„
„ 12	„ 15	.. ..	30	„

Taking this as a basis, and omitting preliminary and final questions, we can say that, for the younger children, a lesson should vary from 20 to 30 minutes, and for the older ones, from 30 to 45 minutes.

Everybody is capable of more sustained exertion and of giving longer concentrated attention in the early part of the day ; therefore the longer and more difficult lessons should always be taken in the morning session.

Afternoon School.

It is now being recognized in all educational quarters that morning is the time for strenuous mental work, and that the afternoon should be given up to lighter subjects, mainly of a practical character. As far as possible the classroom should be turned into a workshop for the greater part of the afternoon; various kinds of handwork can be done, and the children may be allowed to move about freely for materials, etc., and permitted to exchange opinions and discuss methods with the teacher and with their fellow scholars. If an allotment garden is attached to the school, some portion of the time may be spent there. Experimental work in science, practical arithmetic, handwork in wood, cardboard, paper, or clay, needlework, domestic work, and singing should be the subjects for the afternoon session.

Division of School Work.

Our school work may be roughly divided into two sections, viz., subjects such as literature, history, geography, and science, which enlarge the pupil's circle of ideas, and are employed to develop his thinking powers, and those that are largely imitative, such as reading aloud, speaking, writing, and drawing. Of course, not one of them is in a water-tight compartment, they all overlap. Speech and writing are used in the first set of subjects, and new ideas are acquired during the practice of the second set. The distinction, however, is true in the main. The first set aims at the extension of knowledge, and the second at the acquisition of skill in speech, and with hand and eye.

We have to remember that all real knowledge is the knowledge of experience; and knowledge thus gained is used in deciding what other ideas should be accepted or rejected. In school, experience is gained mainly by practical work, and this induces a readier assimilation of the facts taught in the class lesson.

But teachers must not be led astray by any of the catch phrases that periodically appear and disappear. The emphasis to-day is upon 'practical' work. But the teacher must keep a suitable balance. The younger the children, the more practical work they need as compared with class teaching. With older children the same amount of practical work means slower progress in some subjects with little or no increase in efficiency. An experiment may often be performed by the teacher in front of the class with the help of one or two pupils, in one-third of the time that would be required by an individual pupil, and with the same effect. The teacher must be the judge as to which is the better and more

expeditious method, and the one likely to lead to a permanent result.

General Knowledge. One afternoon lesson per week should be allotted to this subject in the upper classes. Of course, children are gaining general knowledge in most lessons; but it is advantageous to have one special lesson in which we can get into closer touch with the outside world, and where we can bring the children into direct contact with present-day celebrities and present-day events. If children can be helped to understand the doings of the world outside the school, and in some small measure to grasp general tendencies and national necessities, and relate these things to their own efforts in school, education will be much more real and more interesting to them. Many important things happening in the world at large are rarely, if ever, referred to in ordinary school lessons, and the 'general knowledge' lesson gives the opportunity.

Children should be encouraged to put written questions on subjects that puzzle them into a box provided for the purpose, and the first part of the general knowledge lesson should be devoted to answering these questions, or to directing the children how to find the information for themselves.

The teacher must adopt a system in dealing with this subject. If nothing particular is happening in the political or commercial world, he can deal with natural phenomena, or with literary, art, and easy scientific matters, such as should come within the purview of every thoughtful citizen. In this way the children will store up a fund of useful information, and they will acquire the habit of noting and

examining many important things which numbers of people now treat with indifference.

The Newspaper. A good weekly edition of a newspaper, such as that issued by the "Times," may be of great value in the upper classes of a school, not only as a means of keeping children up-to-date regarding current events, but to bring them into touch with real life, and to train them how to read the newspaper. There are parents who object to their children reading the newspaper at all; and, in the case of some papers, they object with very good reason. As far as children are concerned there is objectionable matter in most papers; but surely that shows the need for guidance which they will find useful when they come to read the newspapers as their elders do.

There is too much newspaper in these days; it forms the sole literary library of many people. It should be the aim of the teacher to put it in its proper place, to help the pupil to separate the wheat from the chaff, to show him that newspaper knowledge is for the most part sufficient only for the day thereof; and for these reasons most of the spare time at home devoted to reading should be given to "books of all time." A sincere effort to cultivate the critical powers and a true literary taste will solve the difficulty.

Reference Books. Old Dr. Johnson of dictionary fame said:—"Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information about it."

Knowing where to go to get information has not received sufficient attention in elementary schools.

Teachers have tried to be walking encyclopædias; they have led children to think that every item of necessary knowledge is always at the tip of their tongue, and that no matter what the question asked, the answer will be immediately forthcoming. There are times in the course of a lesson when this has to be done; but it should not be a regular rule of school life.

Undoubtedly children should always be encouraged to ask questions, and to seek information on any subject in which they are interested; but, instead of giving the answer, even when he knows it, it is much better for the teacher to tell a child where he can find the information he wants. Send him to the school Reference Library for the dictionary, atlas, book of quotations, year book, 'Whitaker,' a volume of the encyclopædia, text-book, or whatever is required, and direct him how to find what he wants. This method is far more valuable, as the pupil himself will discover when school days are over.

Debates. Debate is a valuable means of sharpening the wits of the children in the upper classes. Even those who are considered dull will readily respond if the subject chosen is of interest to them. It is a good plan to choose an easy subject that lends itself to a difference of opinion; *e.g.*—

(Boys.) "Which is the better game, cricket or football?"

(Girls.) "Who has the easier life, father or mother?"

A day or two before the time appointed for the debate, eight or ten of the sharpest children should be chosen to take the lead. When sides have been

arranged, each four or five should be given opportunity to meet by themselves to discuss the questions, to note the strong and weak points on both sides, and decide on the best methods of dealing with them. Each member should be given some definite portion to attack or support, so as to avoid repeating what others have said.

When the debate takes place, the teacher occupies the chair, and sees that the recognized rules of debate are kept. After the two leaders on each side have spoken, the way is open for any member of the class to join in; the two selected boys on each side who have not spoken are held in reserve to reply to any further criticisms from the body of the class.

Near the close, the leader on each side is allowed three minutes to reply to criticisms, or to make any point clear. After this, the chairman sums up the cases impartially, dealing with the good and the bad points, and then asks for a decision by show of hands.

As a stimulus to boys in the body of the class to take part, a promise is made that any who distinguish themselves shall take a leading part in a future debate.

Occasional exercises of this sort will be found to cultivate alertness, to exercise the reason and judgment, and give children the power to express themselves in a straightforward and intelligent way. They also train children to control their tempers and feelings, and lead them to recognize that there are two sides to most things.

The Need of System.

The old saying, "A place for everything, and everything in its place," applies to schools as much as to the best business houses. Method and system are indis-

pensable factors in any well-conducted class or school. So many kinds of material are used in the course of the day's lessons that carelessness in their disposal means waste and a serious loss of time. Books, writing materials, pictures, newspaper cuttings, apparatus, specimens, must be neatly arranged and assigned to their own places. Cupboards, teachers' desks and drawers, should never be allowed to get into a state of chaos.

A little foresight and care in these matters will prevent a good deal of upset and irritation. Nothing is more annoying to a teacher than to be unable to find a thing that is needed for immediate use, to discover that pens and pencils need attention when the children are called upon to write or draw, or to find that all the test tubes or paint pots have been put away dirty and are unfit for present use. This kind of thing disorganizes the work, and often spoils the teacher's temper for the day. An example of orderliness will have its effect upon the children; they will realize its importance, apply it to their own habits and actions, and will some day feel grateful to the one who first taught them its value.

Arrangement of Desks.

Why should desks always be arranged in parallel rows facing the teacher? Probably the only reason is so as to get the light from the left side. But the arrangement is very inconvenient in other ways. Placing a double or triple row of desks in semi-circles so that the children face one another would be much better, at any rate in a well-lighted room. It is much more interesting to see the face of a preacher in church, and a speaker at a public meeting, than to be obliged

to stare at the back of his head. And if children in school can see the facial expression of the one who is making a statement or answering a question, they will take much more interest in it, and will be much more attentive to what is being said and done.

Home Lessons. Home lessons are more the bane of the secondary school child than of the one who attends the elementary school. The time is rapidly approaching when secondary school teachers will have to abandon either home lessons or the afternoon school; the attempt to retain both is having disastrous consequences.

Teachers tell parents that the school curriculum cannot be got through without the preparation of lessons at home. The obvious reply is that, if such be true, the curriculum must be shortened. When Training College students and many High School scholars have lectures in the morning and 'prep' in the afternoon, it is a strange idea that condemns young growing children to lessons all day and preparation in the evening.

Sir James Crichton-Browne, the distinguished physician, says :—

> "Home lessons are an invention of the Evil One. They poison sleep, and, like Macbeth, they murder it. Besides getting the normal number of hours of sleep, a child's brain should be prepared for sleep by getting all its hard work done in the morning, leaving only the lighter brain work for the evening hours."

Lack of sleep, caused very frequently by the brain being tired and the child excited through overwork up till bedtime, is a real danger that stunts physical

growth, retards mental development, and, in the case of nervous children, often does permanent injury. To give growing children two, three, and sometimes four hours' work to do in the evening after a day at school is the best way that can be devised of sowing nervous and mental diseases. No teacher who has spent one serious hour in child study would ever dream of imposing it; and no parent who has the welfare of his child at heart would ever think of allowing it to be imposed.

Have teachers in elementary schools ever tried to visualize the conditions under which the home lessons of many of their children have to be done? There is one living-room, not always well-lighted. Just one corner of the table can be occupied. Father is usually too tired and mother too busy to answer questions. The work often has to be left half-a-dozen times so that the child may go somewhere of importance or attend to something that must be attended to. Under circumstances like these the home lessons are a greater source of worry to a child than the whole of the day's work at school, and they are not worth it. Where the home conditions are favourable, and the parent is desirous that a small amount of home work should be done, by all means let it be given.

Where children do not attend school on Saturday mornings, there can be no objection to setting for the week-end home work that may occupy an hour or so on Saturday; but it must be of a kind that the child can do by his own unaided effort, and something that he enjoys doing, if it is to help in training him to be self-reliant and to work by himself. An essay—the pupil choosing his own

subject—a painting or drawing, and sketches of science experiments and apparatus lend themselves best to this purpose.

The habit of private study should be cultivated at school; and then, when the proper time comes and the necessity arises, it will be readily and easily transferred to the home.

Some Useful Maxims.

(1) Learning makes a man a fit companion for himself.

(2) Train up a child in the way he should go, and when he is old he will not depart from it.

(3) When pupils love the master they will soon love the teaching.

(4) To prepare for complete living is the function which education has to discharge.

(5) In becoming enlightened, the world rises to unity.

(6) There is no darkness but ignorance.

(7) No good work is ever lost.

(8) A man is but what he knoweth.

(9) Tongues in trees, books in the running brooks, Sermons in stones, and good in everything.

(10) What the mind is intent upon, that it remembers best.

(11) Knowledge comes by eyes always open, and working hands, and there is no knowledge that is not power.

(12) Knowledge is power; education is life.

(13) Knowledge may be power to do evil as well as to do good.

(14) Work is a blessing to the soul of the man who works.

Chapter II.

READING.

A Love of Reading.

Perhaps the most important practical work the teacher has to do is to give his pupils a love of reading; not only a love for books that are amusing, but for those that are informing. A love for books that are amusing or pleasurable will come more readily than love for the other kind. What is needed in the former realm is guidance, and the cultivation of the habit of treating it more in the nature of 'dessert.' To give children the desire to read in order to get to know, to find out information for themselves, to gain new ideas, is of first importance. If the child has that power, self-development and self-improvement are well-nigh assured; for he will be able to 'carry on' when there is no teacher at his elbow, and no hope of help beyond what he can find on the shelves of the Free Library.

Books read for amusement are often 'skimmed'; if too many of these are read in a given time, 'skimming' may become a habit—a habit which is fatal to serious reading. When reading a 'solid' book, children must be taught to weigh every sentence, criticize the ideas, and express them in their own words. Those who have acquired this power will develop 'from within,' and will in future years never be at a loss as to what to do with their spare time.

How to Read.

Children need to be taught how to read, so as to gain information for themselves. The paragraph should first be dealt with, and the children should be practised in stating the

contents in one short sentence. Various statements will be given by different children. The teacher will take each one, show in what way it fails or succeeds, and then choose the most suitable from those given or amended. Unless the children have read the paragraph carefully, and have grasped its leading idea, they will not be able to summarize its contents into a single sentence. The same method should be adopted with succeeding paragraphs, and then the consecutive ideas should be linked together into a suitable summary of the whole. The habit of doing this will not come by chance, or grow of its own accord; it must be cultivated.

In addition to this, children must be encouraged to ask questions and to criticize printed statements. They should not be allowed to take a thing for granted because the teacher says so, or because they have seen it 'in print'; they should be taught to demand sufficient reasons why things are so, or upon what grounds certain statements are made.

Children should also be taught to ponder over what they read. Ideas should be turned over and over in their minds; they should not be allowed to jump from one idea to another without thought; that way lies confusion. They must look at an idea from various points of view, think about it, discuss it, and then it will not only become their own, but it will often give rise to a succession of ideas that will be of great value.

Effective Reading.

A great deal of unprofitable reading is done in these days. Books are obtained from the Free Libraries, sometimes one or two in a week; they are rapidly devoured and as

rapidly forgotten. These books usually possess some dramatic interest, but little that will be of permanent value. This is a matter which ought to receive attention in the elementary school. Failure to do this frequently causes children and others to fly to ephemeral literature that needs little or no mental effort, rather than to works of solid worth.

Children must be taught to read sentences carefully, even such as contain several subordinate clauses and are rather lengthy; they must get the central idea fixed in their minds, and be able to tell its content.

Plenty of practice must be given in reading and grasping such sentences, and children must be trained to use thought and imagination during the operation, so that no sentence be slipped as being useless; they must see that each one represents some particular thought which must be grasped and understood. In this way, what is read will be assimilated, and the habit once formed will be the means of acquiring the leading ideas in any book that may be rather difficult.

Important Points in Reading.

The following points should in turn receive the teacher's careful attention. When any one of them is being dealt with—and one is quite sufficient for any single lesson—the oral reading should be preceded by practice exercises on the blackboard illustrating the point under consideration. These will also serve to draw the attention of the children to the main aim of the lesson.

(*a*) *Pronunciation* :—This depends mainly upon sounding the vowels correctly.

(*b*) *Enunciation :*—Depends upon the correct sounding of consonants.

(*c*) *Articulation :*—The proper fitting of one syllable into another. This depends largely upon enunciation ; and if the children are slovenly, careless, or inattentive, it usually shows itself here, as witness what the chemist's boy said when he first looked round the shop—" Wha' a lo' o' lill bockles ! "

(*d*) *Pitch :*—This is often too high ; the children must be taught to read in a natural tone of voice.

(*e*) *Modulation :—i.e.*, variation in pitch. The value of this can be shown by contrasting it with monotone.

(*f*) *Pace :*—This is always determined by the subject matter ; it should never be fast, and never drawling.

(*g*) *Emphasis :*—This is used to impress by contrast some particular statement upon the listener. There must be clear understanding behind it. It can best be taught by taking a suitable sentence and showing that a different answer is required when the emphasis is laid on a different word ; *e.g. :*—

(1) *Did* you walk to town to-day ?
No. I changed my mind about going.

(2) Did *you* walk to town to-day ?
No. I sent my sister.

(3) Did you *walk* to town to-day ?
No. I went by tramcar.

(4) Did you walk to *town* to-day ?
No. I went into the country.

(5) Did you walk to town *to-day ?*
No. I went yesterday.

(*h*) *Phrasing :—i.e.*, the proper grouping of words

to convey ideas. This depends upon understanding the piece, and knowing something of punctuation.

(*i*) *Fluency :*—To secure this the words must be recognized at sight and easily spoken ; the eye must run on in advance, and the mind must grasp the sense of the passage at the same time. Let the children know that fluency and rapidity are not synonymous terms.

(*j*) *Expression :*—This is the highest quality of good reading ; it is much more than emphasis. To secure right expression the reader must enter into the spirit of the author and interpret his mood and his mind. He must feel the sentiments and emotions of the piece ; the ' heart ' must come into use as well as the ' head.' This quality can best be cultivated by studying, learning, and reciting high-class selections of poetry.

Reading Lessons in Upper Classes.

In the upper classes lessons resolve themselves mainly into (1) information lessons, and (2) elocution lessons. For information lessons the teacher should give a brief and suitable introduction, deal with new words or phrases and their meaning, and then there should be silent reading by the children, questions being allowed by, and explanations given to, individuals while it is going on. Later there should be oral questions on the matter read, or several children should be called upon to give a connected account of certain parts. Occasionally, notes should be taken, or paragraphs summarized.

For elocution lessons, a piece should be chosen that has been read before, so that difficult words will be known and no textual explanations will be

needed. It should be preceded by vocal drill, and the aim of the teacher should be to deal with one particular point at a time; *e.g.*, enunciation, or phrasing. There should be occasional pattern reading by the teacher, and as much individual reading aloud as time will permit. It must never be forgotten that reading must be *taught*, not merely *heard*.

In all reading lessons, except those taken for purely elocutionary purposes, maps, blackboard sketches, and specimens should be used wherever possible.

Some of the information lessons should also be first dealt with by allowing individual children to read aloud under guidance; especially will this be the case with English classical prose and poetry. Here the teacher will read long selections himself, and then call upon separate children to read a portion each. He will deal with everything of note in each paragraph as it is read; pronunciation, enunciation, punctuation, emphatic words, metaphorical language, reason for variation of pitch and pace, biographical, historical, geographical, scientific, and other allusions.

These lessons, in addition to their intrinsic value, will teach the children how to proceed during their silent reading lessons.

Silent Reading. Silent reading affords a valuable training in mental concentration. By this method children obtain information for themselves; there is also more pleasure in it than in the ordinary type of reading lesson, because there is less restriction. Let the children read their story books, and public library or school library books in their spare moments; this will be found much more useful

and enjoyable than sitting still with hands behind or arms folded staring into space, or even playing and talking for want of better employment. Occasionally let them take notes, or summarize a chapter when reading history, geography, or nature knowledge; if they are reading a story book, or a play, let them set down the main qualities of one of the chief characters, or give a descriptive account of some particular incident.

Always, when the pupils are reading for definite information, the teacher must set the exact amount of work to be done. If a number of questions on the subject-matter are written on the blackboard, they will guide the children as to which are the most important parts, and will make the acquisition more definite, and therefore more lasting. Towards the end of the lesson these questions should be answered orally by different children as a test of what has been done. In this way they will acquire the habit of reading to some purpose, rather than rushing through a book and forgetting all about it in a week or two.

The Aspirate. The correct use of the aspirate still demands attention in speaking and reading, its proper use or misuse being regarded as one of the indications of culture or the lack of it. Children must be taught to use it mechanically and easily; too much stress on it is as faulty as its omission.

In many cases where it is not the initial letter it is not sounded at all, as in 'Nottingham,' 'Tottenham,' 'Durham,' 'exhibit,' 'shepherd.' Of course, in names like 'Wolverhampton' it is still sounded. In words beginning with 'wh,' where the 'w' is

sounded, as in 'where,' 'which,' 'when,' 'whither,' it is now not unusual to omit the sounded aspirate; where the 'w' is silent, the 'h' is always sounded, as in 'who,' 'whole.' In a few words where it is the initial letter it is silent, *e.g.*, 'heir,' 'hour,' 'honour,' 'honest,' and words derived from them. In 'humble,' 'humour,' and 'hostler,' it is now usual to sound it.

Where the use of the aspirate is faulty, practice exercises should frequently be given; for example, "When he reaches manhood he and his adherents will show more honour and less humour towards human beings."

These can be repeated by different children prior to an oral reading lesson, and will prove very helpful in producing the desired result.

Corrections in Reading. Do not allow children to raise their hands whenever they think a mistake has been made by a child who is reading. This practice upsets the reader and transfers the thoughts of the children from the subject-matter of the piece to some trivial error. Moreover, it breeds a spirit of fault-finding which is very objectionable. Occasionally allow children to indicate any plain error when the other child has finished reading; but as a rule make the corrections yourself, especially if you are teaching one of the lower classes.

Reading Books. The usual plan of having three or four complete sets of readers in each class should be abandoned. One complete set of literary readers for class teaching is sufficient. In addition to these there should be about six books

of a kind in the lower classes, and books all different in the upper classes. This will provide for a great number and variety of books for the children to read at no greater cost than that of complete sets.

In the lower classes, where all the mechanical difficulties have not been mastered, the teacher can take half-a-dozen children at a time, while the others read to themselves. In the upper classes, the teacher passes round during the silent reading, asks a few questions here and there to see that the reading is being properly done, makes any explanations asked for, and gets to know why the pupils like certain books, and what their opinions are of any of the various characters. In this way the children will be introduced to a large number of excellent books and poems, and a real taste for reading will be created.

Chapter III.

SPELLING.

The Teaching of Spelling.

Undue importance was given to this subject in the past; now there is a tendency to neglect it. But amongst outsiders, at any rate, inability to spell correctly is looked upon as a sign of neglected education, and a letter containing errors in spelling always gives a bad impression.

Spelling is harder than reading, because no matter how irregular the word may be, each letter in the word has to be remembered in its correct order; whereas, in reading, the appearance of the word as a whole recalls its sound.

Spelling depends largely upon the memory; the eye must observe the exact form of the word, and the picture must be retained in the memory for future use. A good speller has a quick eye for form, and is nearly always good at drawing, for spelling is really memory drawing of pictures of words, and therefore it will have to be learnt by practice in drawing the word forms correctly, *i.e.*, in writing them. Pupils who are weak in drawing will probably learn to spell more readily through the ear than through the eye.

The power to spell is acquired by *doing* rather than by *describing*. Spelling aloud or *sotto voce* is of some value, as it helps the eye to recognize the form, and probably to retain it; but with most children it should be secondary in its use to writing.

The power to spell should be acquired when the memory is most retentive, *i.e.*, up to the age of eleven or twelve. A young child is not so alive to the anomalies in words as we are, and so will learn to spell with far more ease than we are able to do.

The following are useful aids to spelling :—

(1) *Reading.* When a child frequently meets with the same word, its form is impressed on the memory through the eye. Good reading and correct spelling usually go together. The slurring of words and syllables is a great hindrance to correct spelling ; hence the necessity of clear pronunciation, enunciation, and articulation, in reading and speaking.

(2) *Word-building.* Some words present no difficulty, if children are early taught to give the sound-values of letters. In the lower classes most of the time should be spent with regular forms. A few irregular forms must be learnt even by children in the lowest class before they are able to write a sentence correctly ; for example, 'was,' 'should,' 'ought,' 'said,' etc. These must be written over and over again until they are well known. As soon as a word is known at sight, a child, if it does not already do so, should be encouraged to use it as part of its own regular vocabulary. Occasionally, words such as 'saw,' 'was,' 'from,' 'form,' etc., should be grouped together to show contrast, and then thoroughly learnt.

(3) *Transcription.* This should be used constantly as an aid to correct spelling. The act of writing a word compels the eye to note each letter carefully as well as the order of the letters. It is the only means of learning irregular words. When dealing with these, the same word should be used again and again in different sentences until its form

is impressed on the memory. All copying of words and sentences must be very carefully supervised; otherwise, the exercise may be doing more harm than good. So far as is possible to prevent it, children should never be allowed to see any incorrect forms of words; the correct forms should be so impressed on their memory that they can be reproduced automatically. A well-graded course of instruction such as is given in the Author's *New English Course** for the standards, is the best way to success.

Let us remember that spelling is not an end in itself; it is only a means to an end. It is necessary to spell only what has to be written. Children in the upper classes should be trained to use a dictionary, and should be allowed to use it whenever they want to know the spelling or meaning of a word.

The Spelling of New Words. Do not waste time in teaching the spelling of hard words from the reading books; most of them will never be used by the children either in speaking or writing. Reading is a much easier process than spelling, and children ought not to be held back in order to teach spelling instead of reading. Words which come, or ought to come, within the pupil's vocabulary, should be taught systematically. When words have been learnt the teacher should insist on their use in oral work and written composition. If they are not used they will very soon be forgotten, and then the time taken up in learning to spell them will have been wasted. If the children make use of the new words a few times, they will become incorporated in their speaking and writing vocabulary.

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Encourage children to discover new words for themselves, find out their meaning from the dictionary, and learn to spell them. A little commendation bestowed on the children who show an extended vocabulary will go a long way to stimulate the others.

As a variation of the ordinary spelling lesson, give notice that, when the next lesson comes round, children will be asked to come to the blackboard and write down one new word they have learnt; everybody will be expected to have one ready. They will be found to take up with the idea eagerly; and, when the time comes, each one will write down his or her word correctly, and be proud of it. In this way a large number of new words will be learnt, and if the teacher insists that the one who writes a word must be able to use it, the vocabulary of the children will be permanently enlarged.

Speaking and Spelling.

When children are learning to spell, care must be taken that they *say* the words correctly. For beginners, each letter should be sounded phonetically—a-n-d; b-u-t; and practice should be given in writing down the letters according to sounds; giving names to the letters may be left to a later stage. The young child's difficulty is in connecting the sound of the letter with its form, but the writing down of the sound-forms time after time will soon help him to connect the two.

When words of more than one syllable are introduced, it is equally important that each syllable should be pronounced clearly and correctly. Slovenly enunciation is responsible for a good deal of incorrect spelling. There is no need in any of the lower classes

to break up the words into syllables according to their derivation; the syllabic division need only agree with the derivation where the pronunciation agrees with it; otherwise syllabic division may be a hindrance instead of a help. Hence, we should divide into 'ho-ping,' not 'hop-ing'; 'li-king,' not 'lik-ing.' As a rule the syllable should begin with a *consonant*, not with a vowel; if a child spells 'dropping' with one 'p' let him write it in syllables according to this rule, and he will see that he has spelt 'dro-ping' instead of 'dropping.'

In the case of catchy words, it is usually one part only of the word that is difficult. This part should be written in coloured chalk on the blackboard, and underlined in the child's book; for example, in the word 'separate,' the difficulty is to remember whether to put 'a' or 'e' after the 'p.' If this letter be put in red chalk on the blackboard, and if the word be written a number of times by the child and the letter underlined, it will be readily remembered. As far as possible do not let a young child ever see a word that is incorrectly spelt. Seeing incorrect forms, when the correct ones are not firmly fixed in the mind, causes constant confusion and uncertainty. For this reason, children should not be asked to mark their neighbour's spelling errors; let them mark their own under the teacher's supervision.

Spelling Yesterday and To-day.

Some years ago, codes and inspectors demanded correct spelling in pieces of dictation; this gave dictation undeserved prominence in the school curriculum, and led the teacher to devote far more time

to it than it was worth. Composition has wisely supplanted dictation in all the classes of the school; but teachers must not, therefore, conclude that spelling is of little importance.

Correct spelling is as necessary in written composition and letter writing as it was in dictation. The difference lies in the fact that, whereas in former days children had to learn to spell all sorts of words, many of which they would never think of using, and the meaning of which was as Greek to them, now the words to be spelt correctly come within the scope of their comprehension and their writing vocabulary, an alteration which makes the teaching very much more limited and consequently easier. Of course, new words constantly have to be introduced to enlarge the child's vocabulary, and so give it better and more numerous instruments with which to express its thoughts; but, as a rule, these should be taken as the necessity arises; their meaning should be fully illustrated and known, and children should be encouraged to use the new words whenever possible, until they become part of their regular writing and speaking vocabulary.

Dictation Lessons. Dictation should be given only after plenty of transcription, and should be confined to *testing* what has been learnt. It should be used only occasionally, and never just after learning certain words, as that is no real test of retention. Its only use is to find out what needs most practice.

Dictate once only as a rule. It is possible to get into the habit of repeating a phrase three or four times in an unnatural, stilted tone, which is never

done in business circles, and even then some one will ask for the phrase to be repeated again. Children must be trained to listen. Allow no guessing as to how a word should be spelt; if a child does not know it, tell him to leave a blank.

Correction and the re-writing of errors must always follow the dictation lesson. Do not tell children to write out corrected errors three times each, or four times each; that can be done only on the assumption that all the words are of the same difficulty to each individual, which is never the case. Some words may need to be written once only; others may require repeating a dozen or twenty times. Each word should be written until it is known, and then should be tested orally by the teacher.

Chapter IV.

COMPOSITION.

The Importance of Composition.

Many are the complaints in these days that boys and girls cannot write a simple letter correctly. The complaint is not confined to the older children in elementary schools, but includes also those in secondary schools. The root-cause is nearly always a lack of power to use the mother tongue orally, with readiness, breadth, and ability; and so long as that obtains, written composition will be at fault.

This latter exercise does not consist merely of correct spelling, punctuation, and good handwriting; at the back of it all there must be a store of ideas, and the writer must have at his command suitable words to express those ideas. It is a waste of time to ask a child to talk about, or write about, a subject of which he is almost entirely ignorant. Children must be advised regarding the sources of information; subjects must be discussed in class and with individual scholars; a study of the modes of expression of trained literary men and women must be undertaken, and the value and force of particular words and phrases must be considered.

Lessons on these lines will awaken interest, and give delight; they will produce intellectual vigour and independent thought and criticism, and will aid in giving an intelligent grasp of the problems of life.

Thought and Expression in Composition.

The power of expression is a form of skill, and must be cultivated. It may be either vocal or written, and both kinds should be cultivated together. Composition is not form only; there must be clear thinking behind it. Exact expression can only come of clear, correct thinking. There may be clear thinking without exact expression, because the latter is only possible through living in an atmosphere of correct oral language. To cultivate exact expression, a good vocabulary must be acquired by social intercourse and extensive reading, and something must be known of sentence construction, paragraphing, and punctuation.

Clear thinking and exact expression are not natural endowments. Some people are always ambiguous in their statements, as is frequently seen in political speeches and newspaper correspondence. Hence the necessity of paying attention to thought and expression, not only in the composition lesson proper, but in all lessons.

A careful study of good models is of more value than the excessive writing of exercises. Reading and literature lessons should be largely used for this purpose. They quicken the imagination, give new ideas, enlarge the vocabulary, and style is unconsciously learned from them. Language, spoken and written, is largely imitative, and good models of both are very necessary to counteract the influence of the street, and sometimes of the home.

Real Composition.

The old-time methods will not produce real composition; they may exercise the memory and improve the imitative powers,

but they will never secure originality. The teacher who discusses every aspect and detail of the subject, makes a careful outline on the blackboard, questions the class thoroughly to see if his teaching has gone home, will probably succeed in producing some very creditable and readable exercises, but they are not real compositions; for in nearly every case they will be a mosaic of the teacher's mind on the subject. There will be no evidence of individual thought, and little, if any, originality. Set children who have been taught on these lines to write a letter to Uncle Tom in Canada, and most of the time will be spent in biting the end of the penholder as they are trying to find out what to say.

On the other hand, the teacher who merely announces the subject, and then tells the children to proceed with the written work, is asking for bricks without giving straw, and he will find that the pupil is no more advanced at the end of the term than he was at the beginning.

If composition is to be real, there must be plenty of oral work; it is as necessary in the upper school as in the lower. The power of expressing one's ideas in a pleasing and correct manner can be largely acquired; but the ideas must be there first. Give the children a few days' notice of the subject, so that they may gather ideas; boys and girls delight to tell of things they have found out for themselves. When the lesson comes round, let them have ample opportunity to express what they have acquired.

The power of exact oral expression is of use in every phase of social and public life, and is the basis of good written composition. Choose suitable selections from Ruskin, R. L. Stevenson, and similar

authors; have the words, the figures of speech, and the arrangement of phrases and sentences critically examined, to discover where the power and the beauty lie. Occasionally give a subject, and ask the children to write as many expressive statements as they can about it. For example,

The moon—gleamed o'er the waters of the bay.
—thrust her pale beams between the towering trees.

Let them also do plenty of letter-writing, not always in applying for a situation, or in ordering goods, but in actually answering any advertisements in the local paper, and in writing friendly epistles to a school chum. When these are read aloud there will be variety of idea and of expression. Sometimes let the pupils write a story in chapters, such as may occupy half-a-dozen pages of an exercise book. Choose the best four or five to be read aloud, and let the children decide which shall be considered the best of all. The boy who has written it may be allowed to take it home for the enjoyment of his parents.

Taken in this way, the composition lessons will be looked forward to with interest; there will be willing effort and a good deal of originality, and consequently there will be brain exercise, producing mental development and general progress.

Good Speaking. One of the main objects of the English lesson is to teach children how to express their ideas. They all have some ideas about things, but their difficulty usually is to find words to express those ideas. To remedy this, the teacher must aim at getting the children interested

in words; lead them to see their beauty and value, and, by comparing one word with another, help them to see how certain words express more exactly and more beautifully what is meant than other words do. This can only be taught orally. It is only when words are spoken that their power and beauty are fully revealed. In the upper classes selections from the best authors can be given by the teacher; the beautiful words and phrases can be noted and talked about, and children can be encouraged to use them.

One of the best methods of teaching young children how to express themselves readily and clearly is story-telling. The fairy tale, wonder tale, and folk tale have been the instruments of intelligent parents for generations past. The normal child loves a tale as much as it loves sweets. It will listen to the same tale told over and over again, and then ask for another repetition. Not only does the child love to hear of 'Little Red Riding Hood,' 'The Three Bears,' and 'Jack and the Beanstalk,' but it loves to tell the tales to somebody else. It naturally follows that if the parent or teacher uses choice language and a cultured tone, the child will imitate her, and will gradually acquire the habit of using refined and elegant English, without shyness and without hesitation.

To speak the mother tongue clearly, pleasingly, and in a way that is easily understood is one of the best acquirements for anybody; and if teachers would use tales and other interesting episodes, tell them, let children talk about them and re-tell them, there would be less cause to complain of the tongue-tied attitude of so many children when they are

spoken to by a visitor, or are called upon to explain the whereabouts of some place to a stranger.

On another occasion the teacher may tell a good story suitable for dramatization. Time should be given for the children to think about it and prepare to act it, the teacher giving help as to words and expressions asked for. Let the children give their own version of the story by their own actions and in their own language. The acting will help them to put their thoughts into words, and so will cultivate the power of expression. If subjects are chosen suitable to the ages of the children, and such as give plenty of scope for the exercise of the imagination, they will delight in finding words adequate to express their ideas, and in that way their speech will tend to become lucid, fluent, and accurate.

The Power of Speech.

Teachers cannot hope or desire to make their children into orators, but they can do something towards cultivating in them a clear, simple, and ready mode of speech. How difficult it seems for the average Briton to express his ideas to half-a-dozen others in clear, unmistakable terms! Even Members of Parliament have to write letters to the Press explaining what they meant, or did not mean, in a recent speech.

Moreover, what a place of silence is a railway carriage occupied by ordinary people! They will do anything rather than open a conversation. The Englishman is very much behind the Continental or the American in the ability to express his thoughts freely and clearly. He is not naturally unconcerned about everything and everybody, although appearances point that way; for he will often open out

with warmth and vigour among his own particular friends. He is terribly afraid of making an error of speech, or of judgment, and of being laughed at; and that in a measure accounts for his taciturnity amongst strangers.

The school remedy for this is systematic speech practice in all classes; not mere questions and answers, but two or three minute speeches on topics chosen by the children themselves. Let this be taken, and accompanied by debates in the upper classes, and the next generation will show a great improvement in the power of speech.

To Improve the Power of Speech.

In the early stages, the teacher should not trouble much about *correct* speech; he must be satisfied if he can get the children to give ready expression to their ideas; the occasional correction of a glaring error will be quite sufficient. The best way to loosen the tongue is to fire the imagination; this can be done in the story lesson, and then the oral composition lesson will afford an opportunity to use the tongue.

Let the children come to the front of the class, one at a time, and relate a story or part of a story that they know. Do not have the same story told several times by different children. When a story is finished the interest falls; moreover, the subsequent reproductions are apt to be very much alike, and their repetition only causes weariness.

As a variation, an outline story should be put on the blackboard; for example:—

Soldier—river—village—spy—escape.

The children should be allowed a few minutes to think it over, and then one or two should be asked

to tell the story. If it is found difficult, the teacher should make up a story from another outline to show them how to proceed. In this way a number of stories can be taken in one lesson, and plenty of practice given in speaking.

Another variation is to divide a story into chapters, and let selected children take a chapter each; all the teacher need do at the beginning is to give a title to each chapter as it is required. Different children may be allowed to give their ideas as to how the story should end; they will take a delight here in showing their independence of thought and idea.

These methods will wonderfully improve the children's powers of oral expression, and will have a corresponding effect upon the written composition.

To Secure Clear, Correct Utterance.

This can be done satisfactorily only by lessons in elocution. There will, of course, be incidental training in all lessons; but set lessons with the special aim of securing correct pronunciation, enunciation, articulation, pitch, and tone, must be given, if the subject is to be dealt with thoroughly and successfully. Slovenly, careless speech, or such as is muttered through the teeth and puts an uncalled-for strain upon the listener, is annoying and objectionable.

As regards the teacher, the pedantic, superior style, and the dictatorial, high-pitched, loud voice are equally objectionable. The quiet, cultured, vibrant tone is a splendid asset for any teacher; it commands the attention and respect of the outsider, and is a valuable example for the children in the school. Children are great imitators; they pick up

the teacher's style and accent almost unconsciously. If this is worthy of imitation, and is aided by special lessons in correct utterance and in the proper use of the voice, good results are sure to follow.

Handwriting in Composition Lessons. Too much stress must not be laid on the necessity of doing copper-plate writing in composition lessons. The writing should, unquestionably, be easily legible and reasonably neat. But when a teacher insists upon a child going slowly and laboriously, making each letter perfect in shape and size, he is subordinating the composition exercise to that of handwriting, with the result that the exercises look well, but read badly, because thoughts are often expressed in a wooden, mechanical way. Some teachers argue that the neatest and most careful writer usually expresses his thoughts best, and in the most logical way. One has only to apply this test to any of our well-known authors to find that it is not true. It is advisable for written compositions to be done as rapidly as is consistent with legibility.

The Use of the Apostrophe. The ordinary use of the apostrophe presents no difficulty; doubt arises when it is employed with Christian names or surnames. Should we write, 'Charles' Wain,' or 'Charles's Wain'; 'St. James' Square,' or 'St. James's Square'; 'Moses' rod,' or 'Moses's rod'? The general rule is that, if the name ends in 's,' the possessive must be formed by adding another 's' with the apostrophe. Thus we write, and say, 'Jones's book,' 'Dickens's Works,' 'Cham-

bers's Journal.' Ancient names ending in 'es' (as 'Moses,' 'Ceres') add the apostrophe only; thus we say 'Moses' rod,' not sounding another 's' in addition to the one at the end of the word, and therefore writing the apostrophe only.

Care should be taken to see that children use the apostrophe correctly in certain common contractions; they should not be allowed in written composition, except in the conversational portions. In such words as 'haven't,' 'don't,' 'wouldn't,' the apostrophe is, of course, put where the letter is omitted. Pupils should also be warned against using it where it is not required; for example, 'your's,' 'our's,' 'it's'; in the last instance it is admissible only where 'it's' is used for 'it is.'

When to Use Hyphens. There is really no definite rule for the use of the hyphen in English, and teachers must be guided by the general use of the word. Where two words are used as one, and are pronounced with one accent only, they should be joined without a hyphen; for example, 'grandmother,' 'newspaper,' 'strawberry,' 'blackboard,' 'schoolmaster.' But note that we say 'head master' with a similar accent on each word; in such cases the words may be joined with a hyphen, or left as separate words. Even the standard dictionaries do not give one a reliable lead in this matter. In some, the practice is to use the hyphen whenever two words are sufficiently closely associated to warrant it; in others, the compilers frankly state their preference for the separate words, or for the single word, and put their preference into practice, using the hyphen only in such cases as are

sanctioned by long and general usage. Instances of such words are 'cherry-tree,' 'india-rubber.'

The hyphen is inserted where two similar vowels come together, *e.g.*, 'co-operate,' 're-engage'; if the vowels are unlike, the hyphen is usually omitted, *e.g.*, 'reinvigorate,' 'coeval.'

Children should be warned against splitting up a word in any way that suits them, with part on one line and the remainder on the next. Some will even put 'wit' on one line, and 'h' on the next. If any splitting is allowed, it should be done according to the rules of derivation or pronunciation, or not at all. It is advisable not to permit young children to break a word at the end of a line; if there is not room for the whole word, let it be written on the following line.

Punctuation. Correct punctuation is one of those things often talked about but rarely seen, at least in the exercises of school children. The ancients did without it; an omission that makes it so hard for modern scholars to translate the old manuscripts correctly. Punctuation as we have it did not come into use until the days of Henry VII.; before that time reading aloud was almost unknown. The children will be able better to realize the value of separated words and punctuation marks, if the teacher puts on the blackboard a paragraph in which no spaces are left between the words, and no capital letters or punctuation marks of any kind are inserted, and then calls upon one or two of the children to read it aloud. This will help them to appreciate the value of the modern style better than any lengthy explanations.

If a few longer unpunctuated pieces are given, where, of course, the words are separated, the children will usually find out for themselves where the punctuation marks and capital letters are needed. They will notice those places where the pitch of the voice is lowered, and will associate that with the semi-colon and full stop. There will be other places where they will need to ask a question or to take breath; and here they will see the use of the question mark and the comma. Children will be found to learn and to remember the use of punctuation marks better by this method than by any other.

Perfect Compositions not Possible.

It is unreasonable of a teacher to expect the children of any class in an elementary school to produce perfect compositions. Of course, compositions, beautifully written, correct in punctuation, spelling, grammar, and even phraseology can be produced in all the upper classes, but every practical teacher knows that it is not the pupil's unaided work. It may look neat and presentable, but it is of far less value to the child than one that contains a number of errors, if the composition is his own production. Composition that is a mere imitation of the teacher's work is of very little value, no matter how nice it may look. The value of the exercise lies in the practice it gives the child in the use of its own brains, and the opportunity it affords for the development of its own ideas. To make children into automatic machines for the sake of showing a beautiful set of books is a course of action to be condemned; rather should the teacher's object be to produce self-reliant, intelligent beings; and these can be produced only

when they are given abundant opportunities for self-development under the guidance of the teacher.

Errors and their Correction. In dealing with errors we must attend to the form as well as the matter. Time should be spent in discussing the claims of various words, phrases, and expressions. This is of far more value than talking to the class about "common errors," which, as a rule, are not "common" at all. Never waste the time of the class by talking about an error that has been made by half-a-dozen children: call those who have made the error to your desk, or to the blackboard, and talk it over with them. Errors that are likely to be common should be guarded against by referring to the correct form when the preliminary instruction is being given; errors actually made should be discussed with the individual who has made them.

The best plan is to mark the exercise in the child's presence, and to use a system of marking that causes a child to make the first corrections himself. (See "A.L." *New English Course*, Teachers' Book IV., page 38.)

Children should be trained always to read through a letter or composition carefully before handing it in as finished; criticism of their own work is always valuable. It is a good plan to put aside a set of compositions occasionally, say for a month, and then bring them out and let the children correct their own. They will be amused at some of the mistakes they have made; and when they find them out in this way, they are not likely to be made again. Of course, the teacher will finally supervise all children's corrections.

Incorrect parts should be written correctly by the children themselves, usually underneath the completed exercise ; if errors are numerous, the whole exercise should be re-written. The teacher should make it a rule never to examine careless or slovenly work, but to insist upon legibility and reasonable neatness in every exercise.

With very large classes the correction of errors becomes a serious problem. Every child who writes a piece of composition for the teacher is quite within his rights in expecting it to be corrected. It is quite impossible for the teacher to mark in detail the whole of each exercise while the lesson is proceeding, and it entails too great a demand on the teacher's private time to mark them all out of school hours, even were it advisable. If children are encouraged to ask for whatever help or information they need in spelling, grammatical construction, or questions of fact, there will be little need for elaborate marking, especially if the teacher also sees to it that the children are constantly at work and are doing their best. This can be ensured by passing among the children while the exercise is being done, and giving help, guidance, encouragement, praise, or blame, wherever needed.

In addition to the general marking, which under the conditions mentioned should soon be done, half-a-dozen papers should be taken here and there after each exercise, for thorough examination and subsequent remark and criticism. This will give the teacher a good idea of the detailed work as a whole, and will indicate points needing special attention.

Chapter V.

HANDWRITING.

Style.

Handwriting is not quite the mechanical process that many teachers think it is. Style in handwriting is largely a personal matter, and any observant teacher will have noticed how frequently it runs in families. We may attempt to teach all our pupils to adopt the same style—round, Civil Service, upright, or whatever it may be—and thus produce an apparent uniformity throughout the school; but it is a very temporary uniformity after all, as will be seen if children are left to their own style for a few months; individuality soon begins to show itself. The art of reading character from handwriting is not all moonshine; there is a good deal of truth in it. Differences of style are mainly due to differing mental processes, and not to any different form of hand structure. For these reasons the teacher's aim with the older children should be legibility produced at a reasonable speed, rather than uniformity which insists upon the suppression of the child's individuality.

The Teaching of Handwriting.

Handwriting has in days gone by occupied far too much school time; it has been looked upon as an end in itself, instead of a means to an end. Some educationists have the idea that, if a child does neat and beautiful handwriting, he will be neat in his person, and admire the beautiful in other things; but experience teaches that in a large number of cases this does not follow. Many chil-

dren who are quite indifferent regarding cleanliness and personal appearance, are beautiful writers; and many of the cleanest and tidiest children are very moderate writers.

If we remember that writing is taught only as a means of expressing thought, we shall be better able to keep it in its proper relative position.

The art of writing should be fully taught while the child is in the three lowest classes of the elementary school. Some work with the blacklead will be done before children enter the upper school; this will be preceded by teaching children how to make the various letters with the finger in sand, and getting them to trace with the finger the cut-out sand-paper letters that are now so frequently used for the youngest children. They will also be given plenty of practice in comparing the heights and widths of large objects, such as doors, windows, and pictures, before being expected to see the difference between the height of small **e** and small **l**.

When the blacklead is introduced, the letters to be copied should be put on the blackboard; the children should see them made, and in a chatty way the teacher should draw their attention to the shape, size, width, and slope of the letters, as she makes them.

The early attempts of the children should all be in large hand.

Before they begin to write, it is important to see that the body and the hand are in the right positions. These things must be attended to from the very first, or bad habits of posture are contracted which are very difficult to cure. The left elbow must never be allowed to push its way to the front

of the desk near the inkpot—a position which, if long continued, causes curvature of the spine. Twisting to one side, and bending over until the nose nearly touches the paper, should never be permitted.

It is advisable to use double-lined paper with beginners, as a help towards keeping the bodies of the letters of the same size. When the children are able to do this with some degree of accuracy, single-lined paper should be used, and then they can proceed to acquire the art of free writing.

When the child enters the lowest class of the elementary school, he is introduced to the use of the pen; this is a much more difficult instrument for him than the pencil, so at first very easy exercises should be given.

When the various letter-forms and joinings can be correctly made, the copying from the blackboard should alternate with the correct copying of a short passage from a reading book.

These lessons should be continued and amplified for the next two or three years, so that at the age of nine or ten the children have mastered all the mechanical difficulties of writing.

In the higher classes, speed lessons, in which the pace is very gradually increased, should be given; but legibility must always be maintained with it.

Some teachers have observed that, when a child begins to grow rapidly, there is a noticeable deterioration in his handwriting; he knows how it should be done, but he lacks the power to do it; and it may take some time, and perhaps a certain amount of extra practice later on, to regain facility and good style.

A child's writing should not be judged from what he does in the special writing lessons, but from the whole of his written work. A boy who really can write well should never be allowed to scribble his science notes, or to write his composition exercises illegibly. He should learn that "What is worth doing at all is worth doing well."

Copy-Books. The question of copy-books or no copy-books; copy-books with headlines or without; upright writing, sloping writing, or Marr's writing; Civil Service or round hand; Print writing or Script writing—all this is very debatable, and is largely a matter for teachers' own taste and choice. But, whether copy-books are used or no, lower and upper departments, and all classes of the same department, must agree upon the style to be adopted. Children must not be taught to make capital letters and small letters in a certain way in one department or class, and then be taught a different way later on. There must be a uniform style adopted throughout all the classes where the elements of writing are taught; or there will be confusion in the minds of the children.

When children reach the upper classes of the school, there is no need to insist upon their keeping to the same style; here individuality should be allowed to show itself. If speed and legibility be increased, and a certain amount of beauty of form maintained, no more is needed.

Chapter VI.

GRAMMAR.

The Necessity of Grammar.

Formal grammar has been banished from many schools; but surely there is a happy medium between the intricacies and drudgery of parsing and analysis, and no grammar at all. The whole structure of any language has a grammatical foundation; there is always method in its use; and unless children are acquainted with the main principles of this method, it is impossible for them to know the language in anything but a very mechanical sort of way. To learn a language without a real knowledge of the methods of arrangement underlying it, is to learn it merely by imitation; and that simply gives the power to repeat what has been learnt. A knowledge of the fundamental rules of grammar must be obtained, if we are to be quite certain that we have grasped the meaning of what we hear or read, or if we are to set forth our own ideas with force and accuracy.

The Teaching of Grammar.

Grammar should be taught in such a way as to exercise the thinking powers, to make children familiar with the meaning, structure, grammatical and logical relations of the various forms of expression, and to teach them the proper functions of words. One can never be sure of the correctness of language without a knowledge of grammar. Moreover, grammar is the Euclid or simple logic of the elementary school; it is the one subject of instruction that requires abstract thought.

The proper study of grammar teaches children to think clearly and logically, because truths are established only after a series of steps, each one of which depends upon some preceding truth. This is pre-eminently the subject in which reasoning should be developed and judgment exercised.

The *method* of teaching is very important. Grammar is not a set of rules to be committed to memory, and then applied. The truths which grammar teaches are to be found in the language itself; and it is in the discovery of rules by the children themselves through the examination of a large number of selected examples that the intellectual value of the subject consists. The teacher must act as guide. He leads the children to examine sentences illustrating some grammatical truth, and by judicious questioning helps them to recognize it. They can afterwards apply the truth to other examples to test its correctness.

In grammar all rules must be taught *inductively* and applied *deductively*. A definition must never be taught first. It is based upon a generalization of particular truths, and surely the child should be acquainted with the truths themselves before he is asked to accept any generalized statement with regard to them.

The teaching of grammar should be based upon sentences. The sentence is the unit of language. We must take the sentence and teach the children to recognize the functions of the words composing it, and to see that each word in the sentence has its own special work to do.

Teachers must beware of confusing *words* with *things*. For example, in a grammar lesson a teacher

holds up a pen, and says, "What is this?" "A pen, Miss." "Yes, but what is it in grammar?" "A noun, Miss." "Yes, it is a noun," says the teacher. But it is not. Names are nouns; the objects they represent are not nouns. They must also beware of using mechanical tricks, such as, "If a word ends in -ly it is an adverb." Such methods defeat the very purpose of grammar teaching. Reason and judgment should be brought into use every time.

Visualization in Analysis. Visualization is of great value in helping children to understand certain expressions, and to analyse them correctly. Take the following as an example:—

"Around the fire one wintry night
The farmer's rosy children sat,"

or

"Down the snowy mountain side
Thundered the mighty avalanche."

If children are allowed to analyse these without visualizing them, 'fire' or 'night' will be given as the subject in the one case, and 'mountain side' in the other. But let them close their eyes and picture what the lines portray. In the first sentence they will at once see the children sitting round the fire in the farm kitchen; in the other they will see the avalanche tumbling down the mountain side. The subject of each sentence will then be clearly apparent, and the remaining parts will follow quite easily and naturally.

To take another example:—

"In his chamber, weak and dying,
Was the Norman baron lying."

By visualization they at once see the Norman baron, weak and dying, lying in his room. Without this process some of the children would thoughtlessly attach 'weak and dying' to 'chamber,' instead of to 'baron.'

Again :—

(1) The little girl went to town in a pink frock.

(2) The little girl went to town in a tramcar.

In the one picture they see the little girl in the pink frock, and at once realize that no information is given as to the method by which she went to town, and so they attach 'in the pink frock' to 'girl.' In the other picture their attention is drawn not to her dress, but to the means of going to town: and so 'in a tramcar' is naturally attached to 'went.' Little difficulty will be encountered in dealing with analysis if this method is followed.

Chapter VII.

LITERATURE.

The Teaching of Literature.

The teaching of literature, apart from the ordinary reading lessons, will have to take a much larger place in the curriculum of elementary schools under the new Education Act than it has ever done before. Our school children must be genuinely introduced to "the world of books." How many upper classes in elementary schools there are to-day where the children can read fluently, and recite with credit certain set pieces, and yet they have been given little or no opportunity of making a first-hand acquaintance with great English authors. Moreover, they are quite ignorant of prosody, and they cannot tell in a sensible way why they like one poem better than another.

In cases like these the teacher has missed the main object of the literature lessons, which is to give the children a love for good books, and the power to know a good book, selection, or poem, from a poor one. The teacher must himself read a good deal to the children. Choice poems and prose passages must be given to them with all the dramatic power the teacher can command. In this way the pupils will feel the charm and rhythm of the pieces, and will be eager to know more of them. They will also be interested in the scansion of the lines.

With a little preliminary instruction they will discover the kind of metre, how many feet in a line, what variations there are from it, and the different

effects that iambuses, trochees, anapæsts, and dactyls have upon the mind. They should be encouraged to give reasons why they like or dislike a poem or prose passage, and thus lay the foundations of simple literary criticism.

It is a good plan to let the children compose simple verses of their own, using the iambic, trochaic, dactylic, or anapæstic metre, according to the subject chosen for treatment. If they do this they will understand the structure of poems very much better, they will be exercised in finding new and suitable words which will enlarge their general vocabulary, and they will better realize how great such men as Shakespeare, Milton, Tennyson, and Browning must have been to compose the glorious poetry they did.

Whole books must be taken, too ; dramatic parts should be read by the teacher, and the connecting narrative told. For many books which are obtainable from the School or Public Library, an interesting introduction accompanied by a taste of the subject-matter to whet the appetite will be found quite sufficient.

Literature Lessons.

The literature lesson proper in the elementary school should be devoted to what is known as "extensive" study, the "intensive" method being applied only to pieces chosen for memorizing.

In the literature lesson, the teacher must aim at inculcating a love of the best books, and at inspiring his pupils with the desire for more ; he must open up to them the great treasures of our language, and guide their tastes into the right direction. The teacher must take as wide and varied a range of books

as possible, so as to make provision for the different tastes of different children. He must also guard against a mere skimming of books, which undermines the power of concentration, and leaves no permanent impression on the mind. The chief motive of any single lesson is pleasure, and along with that the arousing and retention of interest. At the same time, it must be such as demands effort on the part of the child, and not merely one to tickle his literary palate.

Children must be allowed to express their opinions on characters, actions, and incidents, and encouraged to seek further information on any special features undergoing consideration. One book can be dealt with in three or four lessons. First let there be an arousing introduction, then tell some parts and read other parts of the story, and afterwards let the children read it for themselves. They should be required to give a brief oral or written account of any portion that has been read. If the work is poetry, for instance, a play of Shakespeare, their attention should be directed to famous passages, and portions should be committed to memory.

Stories. The good story-teller is always a favourite with the children, and good stories are the child's natural inheritance. How their faces brighten and their eyes sparkle when the teacher is about to tell them a story! And suitable stories well told are a valuable educative instrument. They cultivate the imagination, enlarge the child's outlook, set him thinking, develop his powers of expression, and implant in him a love for what is good and right. The story should find its place in every class,

and in the higher classes it should be used to place before the children high ideals.

The art of story-telling is not easy to acquire, and teachers with deficient powers of imagination never acquire it. The way is always open to those who have imagination ; but other qualities are needed in addition. There must be patience and sympathy, there must be a good voice under perfect control, and dramatic power must be in evidence.

In telling a story, sometimes let the children close their eyes so as to visualize the scene more accurately. At the close do not point any moral ; leave that to take care of itself. It is as unreasonable to point the moral of a story as it is to explain a joke. Use whatever aids are available to give greater effect ; maps, pictures, models, dress, and implements can all be utilized.

When the story has been told, let the children talk about it, express their opinions regarding what the characters in the piece said or did, and tell what they themselves would have done in certain circumstances ; when time permits, let them make a crayon drawing to illustrate the story. Taken in this way, the story lesson will be productive of much good, and its influence will be felt in the years that are to come.

How to Tell a Story.

Some teachers have the story-telling gift ; others are without it. The former class needs no advice ; the latter and larger class may do very well with help and practice.

Choose a story containing, as a rule, not more than two or three characters ; a story that admits

of plenty of conversation, and of action. The more you can put into it with voice and face and limbs, the more realistic will it be to the children. Every incident must be clearly visualized by the teacher; he must forget that he is a grown-up, and for the time being must live the story. This is the secret of all effective dramatization.

Then the language used must be suited to the capacity of the children. Beautiful, simple English, such as John Bunyan uses in the "Pilgrim's Progress," can be readily and clearly understood by very young children. If their thoughts are diverted by having to wonder what a word means, they will probably lose the thread of the story.

Make the most of your voice; let it be loud or soft, grave or gay, bold or tremulous, thrilling or plaintive, according to the sense of the piece. Imitate where you have the opportunity, both as to sound and pace. For example:—

> "It was a very long train with many heavy trucks in it, and it was going up the valley like this: Chhh! Chhh! Chhh! Chhh! When it reached the top and began to go down the slope, it went Ch! Ch! Ch! Ch! Ch! Ch! Ch!"

Such representations will have a great effect upon young children.

The teacher must also endeavour to keep the curiosity of the children on the *qui vive* all through the story. If the secret is given away at the beginning, or the climax is brought on too early, the interest goes before the story is finished. Do not be afraid of some exaggeration; to a child a thing that is quite of moderate proportions is very, very big.

Of course the teacher must practise the telling of stories before he can hope to do it well. When that power has been acquired, he can take the main facts of any story, and fill in the details himself according to the age of the children, and he can rest assured that both they and he will have a most enjoyable half-hour.

Myths. There is a great deal of interest as well as a great many beautiful and romantic ideas in some of the old myths; and these can be largely utilized in the story lesson. They are often richly imaginative, and appeal strongly to children. The wanderings of Ulysses, and the labours of Hercules, are very real to them. Perseus and Medusa, and Jason in search of the Golden Fleece, never fail to enchant. Some of the ancient Greek and Roman myths have inspired great artists like Lord Leighton and Burne-Jones, and if children know something of the stories they will better appreciate the art. The myths of Scandinavia, too, are worth exploring, while King Arthur and his knights will be a never-failing spring of pleasure.

Let us see to it that our children are introduced to this delightful wonderland.

Chapter VIII.

RECITATION.

How to Recite and Memorize.

The recitation lesson should be *the* lesson where the correct pronunciation and enunciation are given to every word spoken. Elocution should be taught here, if anywhere. The chief rule enforced should be, "Recite slowly." Some children will rush through a piece regardless of sound or sense, as though they were in a hurry to catch an important train. They put little or nothing into the piece, their range of pitch is as small as it can well be; in fact, the whole performance is dull and unimpressive.

Children must have practice in correct breathing, in uttering loud and soft tones, in inflection—the falling voice first and the rising voice afterwards—in expressing rhythm, in changing speed, and in gesture.

When the teacher has selected a poem, he should read it to the children, emphasizing the various points mentioned above. He should then see that it is comprehended, without exhausting its meaning. When this has been done he should read it again two or three times, allowing the children to accompany him quietly, as they catch hold of the various phrases. If cyclostyled copies be given out afterwards, the poem, or a portion of it, will be learnt in a few minutes.

Visualization in Recitation. Visualization will be found a valuable aid in committing to memory various selections of poetry. Things are remembered in proportion as children realize their meaning. Before any attempt is made to learn the lines, eyes should be closed and a series of mental pictures formed, which should be as accurate in detail as the descriptions allow. When these are understood and are become familiar, the lines can be fixed in the mind with comparative ease, and a much larger number will be permanently remembered than by following the usual mechanical method.

Where children are merely required to sit and listen to what the teacher has to say, and to repeat parrot-like line by line as they are told, not much good is being done. The teacher can prove for himself by experiment that the line by line method takes up far more time than dealing with a whole stanza as a unity. Learning line by line is really trying to remember what are for the most part disconnected sentences; whereas dealing with a whole stanza establishes an association between the different statements in such a way that the relation between them is seen at once, and the repetition of one calls up the other with very little effort. The information given must be associated with some form of action or self-expression, or the knowledge will never become permanent.

Rivalry in Recitation. When hearing pieces recited, it is not advisable to call upon one of your best children to recite a selection which one of the dull ones has been attempting, but has failed to accomplish with anything like credit.

Tommy may "show Willie how to do it," but it often gives him too high an opinion of himself at the same time as it shames Willie and very much discourages him. If a dull boy should be called upon first, let him be followed by one of average ability, and bring in the cleverest boy last. As a rule, the reverse order is better. Rivalry is a good thing in its way; but it can easily be overdone, and then it does far more harm than good.

Chapter IX.

ARITHMETIC.

The Importance of Arithmetic.

Arithmetic has always occupied, and must continue to occupy, a foremost place in every elementary school curriculum; but the commercial side of it must not be allowed to crowd out the intellectual side. We are bound to recognize its importance in business circles, and in the ordinary transactions of everyday life; but we must not be led astray by people who expect the elementary schools to turn out the finished article for them, and who are never tired of telling us that children cannot do this, that, and the other as children could in the good old days. One might remind them of the common saying of all generations, that things never were as good as they used to be.

It is the teacher's business to try to meet all fair demands; but it is also his business to train the mind, and arithmetic is one of the chief instruments he has to use. If he aims at children merely getting so many sums correct, and in his hurry disregards principles and methods, he is making anything but the best use of his instrument.

Let both aims run side by side; keep them properly balanced, and the best results will follow.

The Value of Arithmetic.

As indicated in the previous note, arithmetic is of value

(1) as an instrument for mental training;

(2) for practical use.

Both these must be taken together. The child must be trained to investigate, to think in logical order, to advance step by step along a definite line of reasoning, until the desired end is attained. He must be taught to distinguish the essential from the non-essential, and to arrange his work plainly and methodically. If there is to be mental training, the child must not only know what to do, but why it is done.

The practical use of arithmetic to all classes of people from accountants to housewives is apparent to everybody, and for it to be of real value in this direction, operations must be quick and accurate.

Arithmetic should be taught *inductively* and applied *deductively*. Every rule should be taught by the inductive method, and applied deductively for the working of examples by the children when the reason underlying it is fully understood.

Long and cumbrous operations and examples should not be given; they cause fatigue and give rise to a distaste for the subject. Let questions have a close relation to ordinary life, and see that the children set out their work in clear, logical style, with written explanations where needed, so that at any stage the working is quite clear to the teacher or examiner.

Never have only one sum at a time on the blackboard for children to work—if the work is being taken from the blackboard—set down two or three at least; quicker children will be able to work them all while slower ones are doing one. In this way all will be kept busy.

Do not let the children look upon oral arithmetic as a separate subject from written arithmetic; the

two should be closely related. In the lower part of the school oral arithmetic should occupy two-thirds of the time allotted to the whole subject; in the middle portion one-half, and in the higher classes one-third, of the whole time.

Oral arithmetic must be done quickly, or it will not be of much value.

Arithmetic: A difficult Subject.

Arithmetic in most schools is the teacher's *bête noire*. He devotes more time and attention to it than to any other subject, in fact, often much more than it is worth; and yet the results are the most uncertain and the least satisfactory of any of the measurable subjects. There must be some good reason for this discrepancy between the effort and the result, and it lies in the fact that our school work in arithmetic is too expansive, and often too widely separated from that required in ordinary life.

How can this be remedied? All tables must be taught practically and learnt thoroughly, so that their use becomes quite automatic. The ordinary multiplication tables should be taught by means of the ball frame, sticks, and counters; weights and measures by using the scales and weights and the spring balance, and by measuring real objects and cutting out geometrical figures. Shopping sums, interest, and discount must be taught by dealing with actual transactions. Lengthy, involved examples, such as are often found in the text-books, should be entirely excluded; they mean much useless drudgery that disgusts the child. Problems—not 'tricky' ones, but such as are met with in real life, graduated in difficulty, and bringing in the

various rules—short methods, decimals at an early stage, approximations, the use of symbols, and the ability to work equations, will solve most of the difficulties. A narrower curriculum with every section intelligently taught, all tables thoroughly learnt, plenty of practice examples to fix every new rule firmly in the minds of the children, a fortnightly lesson spent in working as many exercises as possible on rules previously taken, both in their present class and in lower classes, and frequent practice in adding long tots and cross tots;—these methods will be found to make a great improvement in the results obtained. Most of the children will soon become proficient, then they will like the subject, and their continued progress will be assured.

Simple Number. As a rule, early ideas of number are acquired through the experience of numbers of objects; but some teachers maintain that the invariable presence of objects is a hindrance to the formation of the idea of number in the abstract. The attention of the child is attracted by the objects in such a way that he cannot form an idea of number without them. On the other hand it is quite possible for a child to count up to 20 or 100 parrot-fashion, without having any idea of the numbers he is naming. The best method seems to be to use dots like those on dominoes; they appeal to the mind through the eye and denote the quantity without drawing the attention of the child to the features of any objects. Of course, when the notion of the number is grasped it may be readily applied to concrete things.

Problems by the Children. Problems in arithmetic are invariably made up by the teacher, or are taken from the textbook. This custom should be modified so as to allow the children occasional opportunities to make problems. One must not only know a subject fairly well to frame good questions upon it, but a great deal is learnt in the effort to prepare such questions—an effort which tends to develop one's constructive powers.

It will do a child more good to frame a suitable problem himself than to solve one propounded by the teacher; and if children are trained to make problems, the solution of which comes within their own capacity and that of the majority of pupils in their class, they will have little difficulty in solving those made by the teacher, or those taken from the textbook. A child will feel proud of being able to make a problem which the teacher allows the whole class to attempt to solve; it will give him a new and greater interest in the subject, which is sure to be followed by good results.

The Story Method. Easy number can be taught to young children by using the story method. For example:—A boy (or girl) found some nuts in a small bag. He took them home and gave his father 3, his mother 3, and his little brother 4. How many was that? Then he threw away 2 bad ones, put 6 in his pocket, and then found that there were 10 left in the bag. How many were there in it when he found it? (28.) Yes. Now suppose of the 26 good ones he had kept 6 for himself, and then shared the others equally among 4 boys, how many would each have had? If he had lost a

quarter of those in the bag at first, how many would have been left? (21.) Yes; and if these were sold at 7 a penny, how much money would be given for them? And so on.

A Useful Object for Number. A box with 10 compartments will be found a very useful object for supplying a large number of exercises for the children in the lower classes, *e.g.* :—

(1) I put 4 beads in each compartment; how many in all? (40.)
(2) If I empty 3 compartments, how many beads remain? (28.)
(3) The beads left in are worth a penny each; what are they worth altogether? (2/4.)
(4) Those taken out are worth a halfpenny each; what are they worth altogether? (6*d.*)
(5) How much are those left in worth more than those taken out? (1/10.)

And so on.

For the Lower Classes. It will be found very effective with the youngest children to take a definite number, say, 36 or 60, and deal with it by analysis and synthesis, in simple and compound quantities, until they are well acquainted with it in all its forms. For example :—

(1) How many dozens in 36? How many half-dozens?
(2) Nuts are 9 a penny; what would 36 cost?
(3) A nest will hold 6 eggs; how many nests to hold 36?
(4) 36 oranges at 2*d.* each? at 1*d.* each? at $\frac{1}{2}d.$ each?

(5) 36 inches in a yard, how many in $\frac{1}{2}$ yard? in $\frac{1}{4}$ yard?
(6) A piece of string a yard long is cut into 2-inch lengths; how many are there?
(7) How many threepenny pieces are equal to 36*d.*?
(8) I buy 2 caps at 8*d.* each; how much left out of 3/-?
(9) Out of 36 sweets I give 3 boys 7 each; how many have I left for myself?
(10) How many yards of ribbon at 3*d.* a yard can I get for 3/-? At 4*d.*? At 9*d.*?

And so on.

Shopping Methods. Shopping methods are useful for teaching dozens, scores, half-dozens, pairs, couples, etc., and for bringing into practical use the various rules taught in the arithmetic lessons.

Call four or five pairs of boys to the front of the class and let them write in chalk on a slate the names and prices of three articles they sell, different names to be put on different slates, and each slate to be held by two boys; *e.g.*:—

(1)	(2)
oranges (2*d.*)	nuts (1/6 a lb.)
bananas ($2\frac{1}{2}$*d.*)	dates (6*d.* a lb.)
apples (6*d.* a lb.)	grapes (2/- a lb.)

(3)
flour (2/6 a stone)
butter (2/- a lb.)
bacon (1/9 a lb.)

And so on.

The teacher goes from one to the other and asks

questions; *e.g.*:—2 dozen oranges and 4 bananas, please; there's a 10/- note. He puts down a piece of paper marked 10/-. The two boys try to see which can be first in giving correct change. Those in the class are also reckoning, and indicate when they have the answer. Their endeavour is to see if they can be quicker than the shopkeepers; if so, they take the shopkeepers' place. The teacher questions first one group and then another, and sometimes allows the children in the class to question. As a variation, the class may also be worked in sections, one for each slate. In these ways interest is maintained, and good practice is given in oral exercises.

Subtraction by Complementary Addition.

Subtraction is best taught by complementary addition. This is the method always used by shopkeepers as being the most rapid and accurate way of giving change; it is also the one used in the Italian method of division. Take the following.

The working is done in this way:—

(i.) 825
378
Ans. 447

8 and **7**=15; set down the 7, and carry the 1 ten.

1 and 7 are 8, and **4** are 12; set down the 4 tens, and carry the 1 hundred.

1 and 3 are 4, and **4** are 8; set down the 4.

Subtraction of money and of weights and measures can be done in the same way.

	£	*s.*	*d.*
(ii.)	12	5	$3\frac{1}{4}$
	6	14	$8\frac{1}{2}$
Ans.	£5	10	$6\frac{3}{4}$

$\frac{1}{2}d.+\frac{3}{4}$**d.**$=1\frac{1}{4}d.$; set down $\frac{3}{4}d.$ and carry $1d.$

$1d.+8d.=9d.$, and **6d.** more$=1s.\ 3d.$; set down the $6d.$, and carry the $1s.$

1*s.*+14*s.*=15*s.*, and **10s.** more=25*s.*=£1 5*s.*; set down the 10*s.*, and carry the £1.

£1+£6=£7, and **£5**=£12; set down the £5.

	Tons	20 cwt.	4 qr.	28 lb.
(iii.)	10	3	1	15
	3	14	2	22
Ans.	6	8	2	21

22 lb.+**21 lb.**=43 lb.=1 qr. 15 lb.; set down the 21 lb., and carry the 1 qr.

1 qr.+2 qr.=3 qr., and **2 qr.** more=5 qr., *i.e.*, 1 cwt. 1 qr.; set down the 2 qr. and carry 1 cwt.

1 cwt.+14 cwt.=15 cwt.; 15 cwt.+**8 cwt.** more =23 cwt., *i.e.*, 1 ton 3 cwt.; set down 8 cwt. and carry 1 ton.

1 ton+3 tons=4 tons, and **6 tons** more=10 tons; set down the 6 tons.

This method is also useful when two processes are involved. For example:—

I have £20. I spend £3 15*s.* 6*d* on Monday; £2 18*s.* 4½*d.* on Tuesday; £1 19*s.* 11½*d.* on Wednesday; and £6 9*s.* 7*d.* on Saturday. What have I left?

	£	*s.*	*d.*	
	20	0	0	at first.
	3	15	6	on Monday.
	2	18	4½	„ Tuesday.
	1	19	11½	„ Wednesday.
	6	9	7	„ Saturday.
Ans.	£4	16	7	left.

Work as follows:—

½*d.*+½*d.*=1*d.*, carry 1*d.*

1*d.*+7*d.*+11*d.*+4*d.*+6*d.*=2*s.* 5*d.*; and **7d.** more =3*s.*; set down 7*d.*, and carry 3*s.*

3*s.*+9*s.*+19*s.*+18*s.*+15*s.*=£3 4*s.*; and **16s.** more =£4; set down 16*s.*, and carry £4.

£4+£6+£1+£2+£3=£16; and £4 more=£20; set down £4.

Multiplication Method. In multiplication it is best to begin multiplying by the figure of the highest denomination, as this method will be of great value when decimals and approximations are reached.

For example:—

```
  69342
    567
 346710
  416052
  485394
39316914
```

Multiply first by the 5 hundreds, then by the 6 tens, and last of all by the 7 units.

Suppose we have to multiply 69·342 by 5·67. Approximately the answer will be $70\times6=420$, or nearer still, $70\times5\frac{1}{2}=385$. This shows us that there will be 3 whole numbers in the answer; so we can multiply as above and put the decimal point after the third figure from the left.

Or, again, take ·0378×·049.

This is approximately ·03×·05, *i.e.*, a hundredth part of ·03×5, or ·15, and a hundredth part of ·15=·0015.

∴ in the product of ·0378×·049 there will be 2 noughts after the decimal point, thus:—

```
  378
   49
 1512
 3402
18522
```

Ans. ·0018522.

The Italian Method of Division. This should be used in the higher classes as taking up less space and time than the ordinary method of division.

Usual Method.

58) 28651 (493
232
545
522
231
174
57

Italian Method.

493
58) 28651
545
231
57

The answer is placed above the dividend, the first figure, 4, being placed over the third figure of the dividend, because 286 contains 58 four times. Then the sum is worked as follows :—

$4 \times 8 = 32$, $32 + \mathbf{4} = 36$; set down 4, and carry the 3 tens of 36.

Next $4 \times 5 = 20$, and 3 carried are 23, and **5** more make 28 ; set down the 5.

Bring down the 5, and proceed as before.

This is the best method for decimals, too. The easiest way of fixing the decimal point in a division sum is to find an approximate answer, as we did when multiplying. For instance :—

Suppose we have $286{\cdot}52 \div 5{\cdot}8$.

Then $286 \div 5$ will give us two figures in the whole number portion of the answer.

$\therefore$ *Ans.* will be 49·4.

Or, again, $\cdot 0135 \div \cdot 009$.

Multiply mentally both sides by 1,000 ; we then have $13{\cdot}5 \div 9$, and $13 \div 9$ gives one figure in the whole number portion. $\therefore$ *Ans.* $= 1{\cdot}5$.

Decimalization. It is very important that boys in the upper classes should be able to decimalize money with facility. It is done by what is known as the *four-five* rule. For example :—

£25 15*s.*=£25+£$\frac{1}{2}\frac{5}{0}$=£25+$\frac{7}{1}\frac{5}{0}\frac{5}{0}$=£25·75. Therefore, if we multiply the shillings by 5 and put the result in the tenths and hundredths places, we have the money decimalized.

Or it may be shown that 1*s.*=£$\frac{1}{2}\frac{}{0}$=£$\frac{5}{1}\frac{}{0}\frac{}{0}$=£·05. ∴ 15*s.*=£·05×15=£·75.

To decimalize the pence and farthings, we have to remember that $\frac{1}{4}$*d.*=£$\frac{1}{9}\frac{}{6}\frac{}{0}$, *i.e.*, ·001 approximately. If we multiply this by the number of farthings contained in the pence and farthings given in the amount to be decimalized, and put the result in the hundredths and thousandths places, we shall have a result very nearly correct; *e.g.*, £32 8*s.* 4$\frac{1}{4}$*d.*

(i.) *four* fours are 16 and 1 more makes 17 (farthings); set down 7 in the thousandths place, and carry 1.

(ii.) *five* eights are 40 and 1 carried makes 41; set down 41 in the tenths and hundredths places; then we have £32·417.

Again, £19 17*s.* 6*d.*= £19·874 according to the *four-five* rule. But we know that 17*s.* 6*d.*=$\frac{7}{8}$ of £1=£·875. ∴ £·874 is £·001 too little. To correct this slight error, we add £·001 to the answer whenever the pence amount to 6*d.* or more; then in this case we get £19·875.

The reverse process will reduce decimalized money to £ *s.* *d.*

E.g. :—£19·875.

£·87÷5=17 and 2 over. Set the 17 down as shillings, put the 2 before the 5, making it 25, and

call them farthings=6¼*d.* Deduct ¼*d.* for 6*d.* or more, and then the answer is £19 17*s.* 6*d.*

Compound multiplication can be worked by the method of decimalization; *e.g.*:—Find the cost of 37 horses at £35 9*s.* 4*d.* each.

£35·466
37
1063 98
248 262
£1312·242 = £1,312 4*s.* 10¼*d.* approx.

The correct answer is £1,312 5*s.* 4*d.*, so that it is only 5¾*d.* too small, which is not much out of such an amount as £1,312. It can be seen at a glance that the error is less than £·001×37, because the number of pence in the sum to be multiplied is below 6, viz., 4*d.*; therefore the error must be less than 37 farthings, or 9¼*d.* As 4*d.* is more than half 6*d.*, rather more than half 9¼*d.* could be added, say 5*d.*, which would bring the answer very near to the exact amount, viz.:—£1,312 5*s.* 3¼*d.*

Decimalization can be used in 'practice' sums.

Suppose I wish to find the value of 250 pairs of boots at £1 5*s.* 10½*d.* a pair.

250 pairs	at	£1	a	pair	cost £250
,,	,,	5*s.*	,,	,,	£ 62·5
,,	,,	6*d.*	,,	,,	£ 6·25
,,	,,	3*d.*	,,	,,	£ 3·125
,,	,,	1½*d.*	,,	,,	£ 1·5625
					£323·4375

Ans. £323 8*s.* 9*d.*

Interest sums can also be worked by decimalization.

Find the simple interest on £1,100 for 3¾ years at 2½% per annum.

Interest fraction $= 3\frac{3}{4} \times 2\frac{1}{2} = \frac{15}{4} \times \frac{5}{2} = \frac{75}{8} = 9\frac{3}{8}\%$.

£11·00	$= 1\%$.
99·00	$= 9\%$.
2·75	$= \frac{1}{4}\%$.
1·375	$= \frac{1}{8}\%$.
£103·125	$= 9\frac{3}{8}\%$.

Ans. £103 2*s* 6*d*.

Find the simple interest on £2,400 for 146 days at $2\frac{3}{4}\%$ per annum.

Interest fraction $= \frac{146}{365} \times 2\frac{3}{4}$
$= \frac{2}{5} \times \frac{11}{4} = \frac{11}{10}$ = Interest $1\frac{1}{10}\%$.

£24·00	=	„ 1%.
2·40	=	„ $\frac{1}{10}\%$.
£26·4	=	„ $1\frac{1}{10}\%$.

Ans. £26 8*s*.

Find the simple interest on £130 7*s*. 3*d*. for 5 months at $3\frac{1}{2}\%$ per annum.

£130 7*s*. 3*d*.	=	£130·362
Interest at 1% for 1 year	=	£ 1·30362
„ 3% „ 1 „	=	£ 3·91086
„ $\frac{1}{2}\%$ „ 1 „	=	·65181
„ $3\frac{1}{2}\%$ „ 1 „	=	£ 4·56267
„ $3\frac{1}{2}\%$ „ 1 mth.	=	£ ·38022
„ $3\frac{1}{2}\%$ „ 5 mths.	=	£ 1·901

Ans. £1 18*s*. $0\frac{1}{4}d$.

Short Methods with Tons, cwt., lb.

To find the cost of a ton at so much per lb., change the price per lb. to farthings, call them £'s, and then multiply by 7 and divide by 3.

For example:—Find the cost of a ton of sugar at $6\frac{1}{4}d$. a lb.

$$£\frac{25 \times 7}{3} = £1\frac{75}{3} = £58\ 6s.\ 8d.$$

The truth of this will be seen when we notice that $\frac{960 \text{ (farthings in £1)} \times 7}{3} = 2{,}240$, *i.e.*, the number of lb. in a ton.

If we wish to find the cost of a cwt., we simply call the £'s shillings in the tons answer.

E.g. :—£58$\frac{1}{3}$ per ton = 58$\frac{1}{3}$*s.* per cwt.
= £2 18*s.* 4*d.*

If the price per ton be given and the price per lb. be required, reverse the process.

E.g. :—£58 6*s.* 8*d.* per ton = £58$\frac{1}{3}$. Multiply by 3 and divide the product by 7; call the answer farthings; this will give the price per lb.

$\frac{58\frac{1}{3} \times 3}{7} = \frac{175}{7} = 25$; 25 far. = 6$\frac{1}{4}$*d.*

If the children can remember that 1$\frac{1}{2}$*d.* a lb. = £14 a ton, many questions can be still more easily worked; *e.g.* :—

2$\frac{1}{4}$*d.*	a lb.	(i.e. 1$\frac{1}{2}$*d.* + $\frac{3}{4}$*d.*)	= £21 a ton.
3*d.*	,,	(i.e. 1$\frac{1}{2}$*d.* + 1$\frac{1}{2}$*d.*)	= £28 ,,
10$\frac{1}{2}$*d.*	,,	(i.e. 1$\frac{1}{2}$*d.* × 7)	= £98 ,,
1/6	,,	(i.e. 1$\frac{1}{2}$*d.* × 12)	= £168 ,,

Another Use for L.C.M.

L.C.M. may often be used to advantage in place of the unitary method, or the rule of three.

Example :—Three soldiers, *A*, *B*, and *C*, can dig a length of trench in 10, 12, and 15 hours respectively. How long will the work take if all three are ordered to work together?

L.C.M. of 10, 12, 15 = 60.

In 60 hours *A* can do 6 times the length.
,, *B* ,, 5 ,, ,,
,, *C* ,, 4 ,, ,,

$\therefore$ In 60 hours $A+B+C$ can do 15 times the length.
$\therefore$ They can do the required length in $\frac{60}{15}$ hr.$=4$ hours.

Example :—A can lay an electric cable in 6 days, B in 9 days, C in 10 days. How long would it take A and B together, or A and C together, or B and C together, or A, B, and C all working together ?

L.C.M of 6, 9, 10 $= 90$.

In 90 days A can lay 15 times the length.
,, ,, B ,, 10 ,, ,,
,, ,, C ,, 9 ,, ,,
In 90 days $A+B$ can lay 25 times the length.
,, ,, $A+C$,, 24 ,, ,,
,, ,, $B+C$,, 19 ,, ,,
,, ,, $A+B+C$,, 34 ,, ,,
$\therefore$ $A+B$ can do it in $\frac{90}{25}$ days$=3\frac{3}{5}$ days
$A+C$,, ,, $\frac{90}{24}$,, $=3\frac{3}{4}$,,
$B+C$,, ,, $\frac{90}{19}$,, $=4\frac{14}{19}$,,
$A+B+C$,, ,, $\frac{90}{34}$,, $=2\frac{11}{17}$,,
} *Ans.*

Example :—A hot-water pipe can fill a bath in 5 minutes, a cold-water pipe in 3 minutes, and a waste pipe can empty it in $2\frac{1}{2}$ minutes. How long will it take to fill it—

(*a*) when the hot- and cold-water pipes are on ?
(*b*) when all three pipes are open ?

L.C.M. of 5, 3, $2\frac{1}{2} = 15$.

In 15 min. the h.w. pipe can fill it 3 times.
,, ,, c.w. ,, ,, 5 ,,
,, ,, waste ,, can empty it 6 times.
$\therefore$ h.w.+c.w. pipes can fill it 8 times in 15 minutes.
$\therefore$ they can fill it once in $\frac{15}{8}=1\frac{7}{8}$ minutes.

When all three pipes are open it will be filled 3+5—6 times in 15 minutes, i.e., twice,

$\therefore$ it will be filled once in $\frac{15}{2}$ min. $= 7\frac{1}{2}$ min.

Ans. $\begin{cases} \text{(i.) } 1\frac{7}{8} \text{ min.} \\ \text{(ii.) } 7\frac{1}{2} \text{ min.} \end{cases}$

Carpet Problems. Upper class children sometimes find difficulty in solving problems relating to carpets for covering a room. They usually fail to see that the carpet when made and laid down is of exactly the same area as it was when rolled up in the piece.

If L_R=length in roll, and B_R breadth in roll, $L_R \times B_R = L_D \times B_D$, where L_D and B_D stand for length and breadth when down ($_R$ standing for roll, and $_D$ for down).

Dividing each side by B_R we have $L_R = \frac{L_D \times B_D}{B_R}$

If length of carpet has to be found, this formula will give it, when the necessary values are substituted. If B_R is required, divide each side by L_R, and then $B_R = \frac{L_D \times B_D}{L_R}$, which can be used in the same way.

Of course, we must ensure that all the quantities given are reduced to the same denomination—yards, feet, inches, etc.

Exercises in Practical Arithmetic. The teacher should make a list of exercises suitable for the children to work; calculations should be made, and then tested. The following may suggest others :—

(1) Buying and selling, and giving change.

(2) Knowledge of paper money—bank notes, treasury notes, postal orders, money orders, cheques, stamps.

(3) Practice with the spring balance, steelyard, scales and weights; estimating weights, *e.g.*, to estimate the weight of a brick, chair, table, book, boy, etc. To compare heaviness of lead, iron, wood, etc.

(4) Judging the capacity of cups, tumblers, jugs, basins, bowls, pans, buckets, etc. To tell how many oz. of water in bottles of various sizes.

(5) To estimate the thickness of a thing by looking at it; length of finger; width of hand; distance round head, thigh, calf, thumb; width of classroom, road, causeway, tram lines; height of hat, stick, boy, girl, cupboard, wall; depth of water in tumbler, glass, bowl; area of pane of glass, classroom, school garden, playground.

(6) To estimate height of tall chimneys, church spires, and then test by shadow measurements; comparison with height of known objects: so many times, etc.

(7) To estimate how long it takes to walk or run round the playground, and from that to find how many miles an hour a boy could go if he were able to continue.

(8) Estimating speed of trains, trams, motor-cars, cabs, vehicles, etc.

(9) Finding the distances from one place to another on the map by means of the scale.

(10) Graphs of attendance, temperature, etc.

(11) Measuring angles of slope and testing with the protractor.

(12) Practice in reading railway time-tables, gas meters, and mariner's compass.

Chapter X.

GEOGRAPHY.

Better Methods in Geography.

And none too soon. It seems only yesterday that we taught long lists of capes, bays, and islands, mountains and rivers, countries and capitals, animal and vegetable productions—lists difficult to remember and as dry as dust. But to-day our facts are associated, explained, illustrated, and they have a certain intrinsic value. We are realizing the close connection between certain geographical features, *e.g.*, how productions depend mainly upon the nature of the land and the climate, and how human development has been influenced by geographical conditions.

Large natural areas are now considered apart from their political divisions, which are not infrequently quite artificial. Complete pictorial scenes of definite sections are provided, of much the same character as would be seen if the district were actually visited.

We have to remember that the two chief factors affecting human life and development are geologic and climatic. Natural areas may be plotted out on either of these bases; but, as a rule, it is found more convenient to make divisions according to geological structure. For example, Great Britain may be taken under five divisions:—

(1) The Highlands occupying the north and west of Scotland.

(2) The central uplands embracing the Cheviots, Pennines, and Cumbrian mountains.

(3) The Welsh and Cornish heights.

(4) The central plain of Scotland.

(5) The central and southern plain of England.

As a rule, large areas should be taken first; these may be subdivided later for more detailed treatment.

After taking a general view of the configuration of the land, and the climate of the district, a section may be divided into areas for detailed study in accordance with what the teacher considers will best answer the purpose he has in view.

School journeys should be taken to all places of local geographical interest; contour maps should be studied, and sketch maps made to show such things as temperature, rainfall, mineral and vegetable productions, etc., and they should be in constant use. Lantern views, stereoscopic views, and good photographs will also prove valuable aids, and interesting extracts from works of travel will make the subject vividly real.

The children must also be encouraged to make their own deductions. A study of the contour of a district, of its supplies of mechanical power in the shape of water and minerals, should lead them to see why certain industries, towns, and masses of people are found where they are, and to recognize the necessity of the lines of communication between one part and another running along the routes they occupy.

When dealing with the geography of foreign countries, the older children should be guided in obtaining books of travel from the Library, so that they may read them for themselves.

These are some of the modern ways, and certainly better ways, of dealing with the subject of geography.

Why Practical Geography?

A few years ago the teacher loaded his pupils with cargoes of geographical facts, most of which were soon washed overboard; to-day he is trying practical methods. Why? Because children learn best and most through self-activity. Things they have to think out for themselves become part of their permanent stock of knowledge, which they are able to use at command. We know from our own experience that what people tell us is soon forgotten, unless we ponder over it and make some use of it. It is equally so with children. For these reasons geography can be taught successfully only through the self-activity of the pupil. He must use his eyes; he must experiment; he must ponder; he must form conclusions, and know how to test them.

A great deal of the practical work consists of measurement, and the pupil must be taught to go about it in the right way. The sources of geographical information are open to him in the atlas, the gazetteer, the newspaper, and in works of travel. He must be trained how to use these sources. If the teacher of geography goes on these lines, the child will enter the larger life of the world capable of making accurate deductions, and of dealing with any problems in this direction that may come before him.

Experimental Geography.

During recent years the teaching of geography has made great progress along experimental lines; measurements, the construction and reading of maps, weather observations, action of the sea and other forces on the land have all been brought within the scope of

the curriculum. This is as it should be. If geography is to be dealt with scientifically, the child must be allowed to use his eyes and his brains; he must observe, make his deductions from ascertained facts, frame his hypotheses, and then verify them. Theory and practice must not be divorced; the one must explain the other.

The action of water, the effects of running water, the erosion of the land by the sea, should all be discussed in dealing with the character of the coast-line. The action of atmospheric forces on interior land, and a talk about glaciers will help the child to understand mountains, hills, valleys, lakes, and rivers, and will induce him to take a much deeper interest in them. Consulting the map will tell him whether rivers are swift or slow, whether they are likely to be suitable for navigation or no, and will help him to see why certain towns have been built on the sites they now occupy.

Physical, commercial, and historical geography should all be taken side by side, and not dealt with as though they were only remotely related to one another. One depends upon the other; the economic geography is explained by the physical and historical; and often the history of a country is largely explained by a study of its geographical conditions.

Geography dealt with in this way will be a very valuable subject in the curriculum; children will be interested, and what they learn will be more likely to become permanent and to lead on to further discoveries and wider knowledge.

Real Geography. This should begin at home. Geographical features in the neighbourhood, or within easy access, should be the standard

by which a fairly accurate notion may be obtained of things and places not within reach. Areas and distances may be grasped in the same way. Places long distances apart are better measured by the time taken to journey thither; *e.g.* :—

Liverpool to	London ..	5 hours.
,,	Paris ..	12 ,,
,,	N. America	6-7 days.
,,	India ..	3 weeks.
,,	Australia ..	6 ,,

For large areas let the pupils ascertain how many Yorkshires to cover one England, how many Englands to cover the United States of America, how many British Isles to cover India or Australia.

Geographical knowledge is a gradual accumulation; care must be taken that every name is accompanied by useful information, so that, when the name is seen or mentioned, the facts associated with it come up at the same time.

Comparisons (points of likeness) and contrasts (points of difference) are of great value in the teaching of geography. To compare and contrast the situation, physical features, climate, products, industries, and government of other countries with one's own is of prime importance, and is the best means of impressing salient facts on the minds of the pupils. Tracing the causes of land configuration, and the advantages or disadvantages of certain physical features is both useful and interesting. Why the west coasts of Scotland and Norway are rugged (not due to Atlantic waves only); why there are so few people and such small towns in the N.W. of Scotland; why Britain is such a great commercial and naval power; the effect of climate on the character

of a people ; and how a nation's industries are determined—all this is real geography.

Geography for Younger Children.

If geography be taken at all in the lower classes, it should be taken mainly in story form. The learning of definitions, the talks about continents and oceans, and the lessons on plans and cardinal points are usually as dry as dust, and often give children a distaste for what is really a very interesting subject.

Talks and stories about children in their own lands ; about shops and shopkeepers ; about fishermen and fishing ; miners and mining ; factories and factory workers ; soldiers and sailors ; policemen and postmen ; transit by road, railway, canal, and river—all these things bring in a large amount of geographical knowledge which is within the child's reach and understanding.

Observation and talks about the geography of the school neighbourhood and of the town or village will come next ; and then talks and stories about children and people in European countries, and in hot and cold countries in various parts of the world ; stories of the voyages of men like Columbus, Drake, Captain Cook, Peary, and Scott ; and accounts of the explorations of Stanley and Livingstone. By this method a good foundation will be laid for the formal teaching of geography in the higher classes.

Preliminary to Plan Drawing.

The drawing of plans in the lowest class is an exercise of very doubtful value. Children often spend a good deal of the time allotted to geography in making accurate plans of various objects—not infrequently objects without colour or interest. In

any case this kind of work should be preceded, if not superseded, by drawings in pencil or crayon to illustrate some fairy or other story, marking in the huts, trees, hills, etc., in places mentioned. The story of Robinson Crusoe and his island, or of the places on Treasure Island, may be talked about in a simple way, and the relative positions of the things mentioned marked on a map made by the children. This will be found very interesting, and will gradually lead to more accurate ideas as to what a plan or map really represents.

The Teacher of Geography.

Every teacher will agree that he is able to teach the geography of a district with which he is personally acquainted far more accurately, and in a much more interesting way, than that of one he has merely studied from a geographical textbook. This being so, it behoves every teacher of geography to obtain as intimate a knowledge of any area he desires to teach as can be got from the writings of those who have that personal acquaintance with its natural features and political associations. Such knowledge cannot be culled from the ordinary textbook; it must be sought in good books of travel.

A good deal of useful information can also be obtained from various guide books, and illustrated booklets issued by railway companies, shipping companies, and travel agencies. Certain annuals also, such as "Whitaker's Almanack," "Hazell's Annual," "The Statesman's Year Book," "The 'Daily Mail' Year Book," and "The 'Daily News' Year Book," contain articles dealing in detail with productions, exports and imports, government, etc.,

and the compilers bring their statistics quite up to date.

Some towns have commercial libraries and museums, where special works may be consulted, productions from all parts of the world may be examined, or local manufactures may be seen in their various stages of production. All these things will bring the teacher as near as possible to the position he would occupy if he had had actual experience of each place and thing to be considered.

Occasional Lessons in Geography. Occasional lessons should be given in geography on up-to-date topics, and on subjects somewhat off the beaten track, for example—What Germany wanted to do in the east of Europe; a hurricane in the West Indies; an earthquake in Italy; the Emerald Isle; the cruel Turk; an eclipse of the moon; a hail-storm; a thunderstorm, etc. These will be found very interesting, and will show the children that geography, like history, has something to do with everyday occurrences. If lantern views illustrating any of these things can be obtained, so much the better.

Latitude and Longitude. Latitude and longitude are often well taught from the theoretical point of view, but are seldom put to practical use in school. This deficiency can be remedied in the following way. Have the atlases given out and opened at the map of the continent of Europe, or of the World, and then ask the children to find certain places; *e.g.* :—

Name a town 57° 10′ N. lat., and 2° 5′ W. long. (Aberdeen.)

Another 51° 5′ N. lat., 17° E. long. (Breslau.)

Another 41° 1′ N. lat., 28° 55′ E. long. (Constantinople.)

Name a cape 36° 22′ N. lat., and 22° 31′ E. long. (Matapan.)

Name a mountain peak 46° N. lat., 7° E. long. (Mt. Blanc.)

Show the position of a merchant ship in 30° N. lat., and 30° W. long. (Let the children put their pencils on the place.)

One of our warships is in 10° S. lat., and 110° E. long; point out its position. (S. of Java.)

In another lesson reverse the process, and ask for the position of various places. In this way latitude and longitude will be better understood, and their uses will be made plain.

Maps. Geography must be treated as a science that deals with actual objects. Cause and effect must be studied wherever possible, and as direct contact with things and places to be studied is in most cases impossible, children must be trained to use the map in such a way that they can see *through* its surface appearance to the real things it is intended to portray. This can be done only by a careful and thorough study of local geography by means of school journeys, and by learning the methods of representing the various features on the map. If this is done, when a child sees the representation of a river, headland, highland, lowland, etc., he will be able to visualize with some measure of accuracy the thing or place represented.

The old political map with its coloured counties, caterpillar mountains, and crowded names should

be scrapped. Orographical maps should always be used, and to read these correctly, contours must be thoroughly understood. A clay model of a hill, or a chain or group of hills, can be made and the contours marked with white cotton. If the model be turned from the horizontal to the vertical, the children will have a bird's-eye view of the contour lines. They will notice that at the steeper parts the contour lines are closer together, and where the slope is gradual they are farther apart. In this way the children will soon be able to read an orographical map with facility. Later, when they read the name of a place in the newspaper they should be able to turn to the index of the atlas, find out the position of the place on the map, tell its height above sea level, give some estimate of its climate, and thence of its productions and the occupations of its people.

Map-drawing by the children should be confined to making rough sketch maps of any district under consideration. Time should never be wasted in drawing the map of France, or India, or any other country over and over again until it can be reproduced from memory. Such time should be utilized in allowing the children to fill in any given particulars in a cyclostyled or hectographed blank map.

The Heuristic Method for Geography and History. In geography and history lessons the teacher is often tempted to do all, or nearly all, the talking himself. He feels that a certain amount of information has to be imparted, and so he talks on while the children sit and listen. The result is that lessons need constant revision, or knowledge of the facts taught soon flies away. To avoid this,

the teacher must put the child in the way of finding out things for himself, and then it will be plainly seen that knowledge gained in this way becomes permanent. For example, before the teacher gives a history lesson on the Crimean War he should advise the children how to get certain particulars from their history textbooks, or from readers, or from the school or public library books; such as (1) Causes that led to the War; (2) Its course and chief battles; (3) Results and terms of peace. The pupils should make notes, which will be supervised by the teacher, and, if necessary, discussed with each individual. Then, when the teacher gives a lesson on the subject a little later, it will take the form of conversation; he will guide the children to make comparisons and contrasts with other wars that have taken place and which they have studied before.

In geography, too, the heuristic method should be applied. The pupil should be required to study the map, to find out and make notes of the general position of a country or district dealt with, its build, its mountains, its rivers and the towns on their banks, and any other features that may be discovered from a careful reading of the map. This again can be supplemented by the teacher in his lessons in the way indicated with regard to history.

This method will be educational rather than instructional; the powers of observation will be cultivated and trained, reasoning power will be exercised and strengthened, the power of concentration will be increased, and the resourcefulness and self-reliance of the pupil will be brought into use to his own great benefit, both during school days and afterwards.

Chapter XI.

HISTORY.

Why Teach History?

Teaching history is really teaching by example. First of all, history should be taught for its moral value. It is one of the elementary school 'humanities.' Dealing with the lives of famous people, and with the actions of communities and nations, may be made of the greatest value in the formation of character.

We should also teach history for the purpose of giving children a sound knowledge of the rise, course, and present position of their own country from the religious, commercial, and political standpoints. These are democratic days; but a democracy unacquainted with history is a danger to itself and to everybody else. Owing to lack of knowledge it cannot test the statements of any wordy, dogmatic aspirant for leadership, nor is it capable of passing sound judgment on projects of great political importance. If the democracy is to rule, it can rule successfully only through a knowledge of the past. A careful study of great men and great events will also afford ample training material for the cultivation of the imagination, the memory, and the reasoning powers of the children.

We must give them some knowledge of the greatest names of all the nations, and through them of the progress of civilization to the point where we

find it to-day. As Kingsley said, "The history of mankind is the history of its great men"; it is certainly true that they usually represent the best, and sometimes the worst, qualities of their race.

Children must be taught to love their motherland, and to be patriotic, but not with that insular and false patriotism which turns up its superior or ignorant nose at other nationalities; it must be a patriotism that begins at home and finally becomes international, as typified in the "League of Nations."

History Teaching Methods.

There are three methods in use in teaching history, (1) the chronological, (2) the regressive, (3) the concentric.

The *chronological* method begins in the lower classes with simple stories from early English history; and, as the children pass up the school, the course proceeds from the Norman Kings to the present day, thus ensuring that just before leaving school the child has a good knowledge of that part of the history of England which is nearest to his own time—knowledge that should be of great use in forming sound judgments of modern events. But this method has two serious drawbacks—(*a*) as the years pass on, the child forgets the earlier history on which the later history of his country depends, and (*b*) he receives no training in historical perspective—a lack which is fatal to the proper study of history.

The *regressive* method begins with present-day things and events, *e.g.*, the Policeman, the Postman, the Great War, and it works backwards to the earliest times. This may seem to be in accord with the old maxim, "From known to unknown," but it

is only seeming. The present is far too complex to be understood without a knowledge of the past; moreover, in his later school years the child will be dealing with history farthest away from his own time, and consequently of least value to him.

The *concentric* method remains to us, and it is undoubtedly the most suitable of the three for elementary schools. The adoption of this method need not exclude the study of a special period or subject, *e.g.*, 'The Nineteenth Century' or 'Parliamentary Government,' in the top class of the school. By the concentric method the lower classes will have lessons on prominent persons and interesting events that form landmarks in history from the earliest times to the present day. As the child proceeds up the school these will be revised and expanded, and excursions will be made from them into other regions, thus gradually adding to his stock of historical knowledge. At the same time, the child will have a complete view, circumscribed though it may be, of the history of his own country, with persons and events in their proper perspective.

In addition to this, no child should leave the elementary school without some knowledge of general history. Where this is not given, he grows up with a far too exaggerated idea of the relative importance of himself and his own country. The uneducated, untravelled Englishman often considers himself as a Gulliver in the famous "Travels," and foreigners as Lilliputians, with the result that he becomes prejudiced and overbearing, and looks upon other nations with a certain amount of contempt. It is the business of the schools to prevent the formation of such views.

History in the Making.

If a class of children be asked what they understand by "History," a variety of answers will be forthcoming. The children will tell you it is about kings and queens, and battles, or about things that happened a long time ago. It rarely occurs to many of them that history has anything to do with their own lives and circumstances.

The best connecting link is to lead them to see that history is being made all the time. Reference should be made to the daily paper and its records, and the children should be asked to name anything important which they think the historians of the future will choose to put down in the history books. A cricket match between Lancashire and Yorkshire will loom large to some, an important football match to others; Charlie Chaplin will be a far more prominent figure to many than will Mr. Lloyd George. Various phases of the Great War will be mentioned, and then by contrast children may be led to see which events are the most important. They will gradually recognize how little it matters to anybody whether Lancashire or Yorkshire wins a match, and how much aviation affects the whole nation; what a temporary sensation a great murder trial is, and how permanent are the effects of the invention of wireless telegraphy and the submarine.

In this way they will realize that history is a record of past and present *important* events, and that if we are to understand the present and appreciate the civil and religious liberty that we enjoy, we must know something of the past. In the same way, those who come after us must know something of the chief things that are happening to-day.

Historical Pictures. The value or otherwise of pictures in the teaching of history is a matter on which opinion is divided. Many historical pictures, even those by famous artists, are no more true to history than some of Shakespeare's historical plays, or certain historical novels. The first consideration with the artist is art, with the playwright or novelist, dramatic effect; and historical accuracy is frequently sacrificed to the artist's or writer's premier idea. Apart from this, a picture stereotypes a particular scene; it imposes upon the children somebody else's idea of it, and so robs them of that pleasure of romancing and imagining which is so dear to the child heart.

On the other hand, the child's idea of scenes, persons, implements, dress, and such like things, will be very wide of the mark if he is left entirely to his own imaginings. A picture of a person whose life is being dealt with can be fixed on the blackboard at the beginning of the lesson; so can pictures of dress, weapons, domestic utensils, etc. But pictures depicting battle and other scenes should be left until the end of the lesson; at that stage they will not interfere with the child's visualization during the teacher's graphic descriptions, and they will aid in correcting any erroneous impressions, and in fixing the probable scene in the minds of the children. The day is rapidly approaching when the history lesson will receive powerful support from cinematograph representations of historical plays and pageants, in addition to the ordinary lantern views which will always be valuable.

Historical Novels. There are many theoretical objections to the use of the historical novel as an aid to the history lesson. There is always a danger in mixing up historical fact with the imaginings of historical novelists. We find men like Professor Saintsbury and Sir A. T. Quiller-Couch in favour of their use, while Mr. Edmund Gosse and others are opposed to it. To the experienced teacher there should be no difficulty in making selections from recognized standard works suitable for illustrating his history lessons, without running any real risks.

How much more vivid and interesting lessons become when further light is thrown upon them by dramatic extracts from good historical romances! The necessary 'atmosphere' they create—the living portrayal of men, manners, and customs—is of the greatest value to the teacher. For example, lessons on the Norman Conquest illustrated by extracts from Lytton's *Harold;* on the character of Richard I. from Scott's *The Talisman;* on the times of Elizabeth from Scott's *Kenilworth*, or Kingsley's *Westward Ho!;* on the Commonwealth from Scott's *Woodstock;* on Monmouth's Rebellion from Blackmore's *Lorna Doone;* on the 1715 Rebellion from Sir Walter Besant's *Dorothy Forster;* on the 1745 Rebellion from Scott's *Waverley;* on the Gordon Riots from Dickens's *Barnaby Rudge;* and on the French Revolution from his *Tale of Two Cities.*

The teacher who uses such aids as these will be quite convinced of their value.

No Lecturing in History. Lecturing in history may be suitable for Training Colleges and Universities, but it is not suitable for elementary

schools. Some teachers prepare a lesson containing a certain number of facts and dates, and reel them off in the course of thirty minutes with an occasional question thrown in here and there, and at the close they feel quite satisfied with their effort if most of the children can give oral answers to three or four important questions. But as a matter of fact the time has been for the most part wasted. Though there may have been apparent attention, little or nothing will be known of the subject a month later.

Narrative must, of necessity, have a place in history teaching, but, at suitable intervals, it should be interspersed with questions demanding thought and judgment on points of conduct or action, on probable developments, and likely results.

The introduction of selected pictures, readings from original sources, diaries, letters, speeches, etc., will all bring in variety, and will help the teacher to avoid pouring out his information in one continuous stream. The more the children can see and examine and find out for themselves, the more impressed will they be by the lessons, and the longer will they remember them.

The Time-Chart. One of the difficulties of the teacher of geography is to get young children to realize the different amounts of space occupied by different land or water areas. This difficulty is often increased by their seeing a map of their county of the same size as one of their country, or even of the continent that contains it; but an adequate use of the map of the world will in time correct their wrong impressions.

The teacher of history has a still harder task in his endeavour to give the child a correct idea of length of time. There is little or no difference in the child's mind between the date of his grandfather's birth and that of King Alfred. If it is difficult for those of larger growth to acquire a true perspective of events both with regard to time and importance, how much more difficult it must be for young children!

One way of partly overcoming the difficulty is by the use of a time-chart. This is an attempt to illustrate lapse of time by space representation. It can only be described as a teaching device, an attempt to represent a mental conception in concrete form; but experience proves that it answers its purpose very well. Care must be taken not to overload the chart, or it tends to distract instead of helping. The best chart is the one made by the teacher with the help of the pupils, and made as the lessons proceed. A good scale is ten years to an inch. If the last vertical line be dated 1910—Accession of King George V.—children will see how much space is required to represent the years since that accession; and by comparing it with other spaces they will have some idea of the duration of various historical events and epochs.

Later on, the pupil will be able to visualize any date along the line of time as easily as a musician can visualize on the piano the position of a particular note on the musical scale. The completed chart should contain the chief dates, leading events, and the names of famous men and women of the different periods. Such a chart will be found easy to construct, suitable for the purpose, and very effective.

The Philosophy of History.

If the teacher is to be a successful teacher of history, he must know something of the philosophy of history; it is only through such knowledge that he will be able to interpret the happenings of to-day. "History repeats itself" is only another way of saying that similar causes produce similar results. Of course it never repeats itself exactly, because the human element is always an incalculable factor. There is a vivid example in Russia of to-day, that tyranny produces revolution, revolution produces anarchy, and anarchy again produces tyranny; and that has always been true. Environment influences man, and man influences environment. We have a glaring illustration of that by the way in which drinking and gambling cause poverty, and poverty drives people to drinking and gambling.

We must know something of the rise and fall of great empires, and the causes thereof, if we are to help in wisely guiding the destinies of our own empire. It is also interesting to observe how the great civilizations have from the earliest times gradually moved westward from Assyria, Babylonia, Egypt, Greece, Rome, Britain, and thus see how the premier power is likely to pass on to America, and maybe, in future centuries, to Japan and China. A knowledge of these things will give the teacher a wider and surer outlook, and will make his teaching much more interesting and effective.

Chapter XII.

SCIENCE.

Science Lessons in Upper Classes.

Science lessons in the upper classes should consist of a judicious mixture of nature-study, physiology and hygiene, chemistry, and physics. They should not be dealt with in any dry technical fashion, but should be more of the nature of enchanting experiments and investigations. If the lessons are made interesting, then the children will exercise their powers of observation, reasoning, and judgment, almost without knowing it; they will take a delight in discovering, in watching, and waiting for, the results of an experiment, and they will cultivate the habit of being careful and reasonably exact.

All older children should know something of physiology and hygiene, but it should be *practical* physiology and hygiene that has an intimate connection with the actual lives of those who are being taught. In physiology there must be less verbal teaching and more examination of parts that can be easily obtained from the butcher. In hygiene more attention must be given to the value of fresh air, personal cleanliness, and sleep, to matters of food values and sanitation, and less to technical things. Nature-study should deal with definite sections of the subject instead of consisting of isolated and often unrelated lessons. "Pond Life," "Bird Life," "Insects," "Bees," all supply lessons of great variety and interest, and if aided occasionally by the microscope and the lantern, the impressions made will be still more permanent.

The work in chemistry and physics should be of the entertaining type, and of things closely allied to daily experience. Experiments in heat and simple mechanics, lessons on the spectrum, the magnet, the compass needle, the dynamo, the telephone, the microscope, and the telescope will be interesting and useful, and the whole will form a suitable introduction to any subsequent study of a definite scientific subject. Whatever apparatus is needed should, as far as is possible, be made by the pupils themselves in their handwork room.

Nature-Study a Delight.

Nature-study, under the guidance of a skilful teacher who loves Nature, may be made one of the most humanizing influences to be found in our schools; not the nature-study that dissects flowers into petals, stamens, pistils, etc., and talks learnedly about pollination, germination, and venation (these things are all right in their place); but the nature-study which leads the child to love beauty in earth and sea and sky, to enjoy the music of the rippling stream, the songs of the birds, the flowers of the field and of the hedgerow, and to revel in the glories of a gorgeous sunset.

Nature-study on these lines becomes one of the 'humanities,' and has a refining influence that is calculated to keep in check those baser elements of human nature which modern commercialism and modern materialism tend to foster. The enthusiastic teacher delights in revealing to young eyes and young minds the beauties and mysteries of Nature; the wonder and pleasure seen in the sparkling eyes of the children are his ample reward.

As one American poet puts it :—

"To go abroad rejoicing in the joy
Of beautiful and well-created things;
To love the voice of waters, and the sheen
Of silver fountains leaping to the sea;
To thrill with the rich melody of birds
Living their life of music; to be glad
In the gay sunshine, reverent in the storm;
To see a beauty in the stirring leaf,
And find calm thoughts beneath the whispering tree;
To see and hear, and breathe the evidence
Of God's deep wisdom in the natural world."

This is the kind of nature-study that gives constant delight.

Experimental Nature-Study.

This should always be done, in the case of older children, by the pupils themselves, and even the younger ones may be allowed to try. Flowering plants can be watched and drawings made on certain dates, so that ultimately the various stages of development may be seen at a glance. Seeds may be grown in sawdust, and at intervals notes and sketches should be made of the shoots. Various kinds of soil can be examined and experimented with, the quantities of manure or lime needed can be ascertained, the amount of moisture required for any particular kind of soil can be discovered, and the effects on it of too much or too little moisture.

In this and other ways previously indicated, nature-study may be made of real value as a training instrument, and will form the foundation of a study that may be usefully and enjoyably pursued in after-school days.

Chapter XIII.

HANDWORK.

Why Handwork is Taught.

When parents or visitors see children at work with clay, cardboard, or wood, they often ask the question—"Well, what is the good of all this? Don't you think they would be spending their time better with arithmetic, reading, writing, and spelling?" A satisfactory answer is not always forthcoming. The following reasons may suggest others:—

(1) Using the hands greatly assists brain growth in children, and therefore develops intelligence.

(2) Systematic exercises increase manual dexterity, which will be found of great value in many after-school occupations.

(3) Such exercises afford the opportunity for self-expression—a valuable factor in child development.

(4) By concrete work and the making of objects and models they introduce more reality into other school subjects, such as arithmetic, history, geography, and nature-study.

(5) They give opportunity to the child to exercise his constructive powers.

(6) The making of useful objects trains him in doing real work.

The Teacher and Handwork.

What an antipathy many teachers still have to the subject of handwork! They look upon it as one of the usual fads that

periodically appear above the educational horizon. But this is quite a mistaken idea. The dislike of special handwork lessons as a means of education is really a relic of the old contempt for manual labour. The schools of bygone days were for the well-to-do, and in those privileged times to work with the hands was considered menial and degrading.

Many of our educational notions have come from the schools of past centuries; they were suitable for application to the pupils of that day, but they are not suitable for those whose future work will be mainly of a manual character. The artist, musician, joiner, mechanic, skilled workman, are judged by their handwork.

Systematic handwork exercises of an interesting kind can be used to develop the brain-power of the children in our schools. But even handwork can be taught in the wrong way. If the teacher first makes the object in clay, paper, cardboard, or wood, explains every detail, makes the whole class do a bit at a time, and all do the same bit at the same time until the object is finished, he may show some admirable models, but, for all that, he has been largely wasting his own time and that of his pupils. By that method they are "cabined, cribbed, confined" at every turn; individual originality and resourcefulness never have a chance.

The child must be allowed to experiment, to discover things for himself, to express his own ideas, and to correct his own errors. If he does these things under the teacher's guidance, he will be interested, and his brain will be developing through the proper exercise of the hand.

The Value of Handwork. Not only is the hand the servant of the brain, but it contributes very largely to brain development. It is the finest instrument in our possession; its power, its flexibility, its adaptability are simply marvellous. It behoves us then to make the best use of it. When the hand is properly exercised, the mind is exercised also; its constructive powers are called into play. Objects are carefully examined, comparisons are made, reason and judgment are called into action, and the child is brought into direct contact with real life. He should be allowed every possible opportunity to exercise his imagination, to find out things for himself, and, in fact, to create. The teacher must act as guide, and aim at getting the child to give free expression to his own ideas. Along these lines handwork will be found a very valuable school subject.

Handwork as Mental Training. The danger in connection with handwork is the teacher's tendency to do too much for the children, probably with the desire of having a number of carefully-finished models to show to visitors and inspectors. With that end in view he constructs an accurate model, and then teaches the children step by step how to make a similar one; all doing the same amount in the same time—no more and no less. Here the teacher does the brain work and the child merely imitates.

The mental value of handwork lies in the opportunity it gives the child to think and reason and judge. He should be allowed to find out a method of construction for himself. As a help in the earlier

stages, he should be encouraged to bring some simple object from home, take it to pieces, and see how it is made; a match-box, taper-holder, or pin-tray will do. He should then be asked to make a similar one. Older boys could make one larger or smaller, which would train them in proportion. The models thus produced may not be as pleasing to the eye as those made under the conditions referred to above; but they will be of far greater educational value. Mental effort will have been called forth in each case, and the interest will have been greater. In special hand-work lessons, the more children are required to do for themselves under the teacher's guidance, especially if they are occupied in making useful objects, the higher will be the mental value of the work done.

Constructive Handwork. Constructive work, whether applied to the making of models in clay, cardboard, wood, or metal, whether in writing an original composition, a piece of music, or a poem, or in framing problems in arithmetic or geometry, is work that increases knowledge and understanding, and gives a worthier ideal of work.

Wherever possible, efforts at constructive work should not only be allowed, but encouraged. In this way the child will have the opportunity to materialize his own thoughts and ideas, and to gain experience at first hand. Whatever the medium be, the same method can be followed. Let the child use his own brains to find out what is wanted; let his be the initiative, not the teacher's. Let him make his own drawings, get his own material, discuss with himself, and maybe with his neighbour, and, if necessary, with the teacher the pros and cons of different

methods of attack; let him, wherever time allows, make his own discoveries, and form his own judgments without being prompted by the teacher or influenced by the teacher's opinion. When the child has exhausted his own resources, then the teacher steps in, and, by a close examination of details and a series of suitable questions, he leads the child to see defects he has not previously noticed, reveals to him his weak points, corroborates his strong ones, and thus puts him on the way for new effort.

This method will not produce 'show' models, but it will develop initiative, increase accuracy, create a desire to do more, and encourage mental, physical, and moral development.

Needlework. The Domestic Service problem suggests that to the emancipated woman the 'drudgery' of household work is anathema. But it will be a very sorry day for English homes, when cooking, laundry, housekeeping, and needlecraft have lost all their charm for English women. The home is still the most potent factor in English life; and one of the important functions of the school is to help to maintain and strengthen and beautify all that the word 'Home' connotes; this can best be done by infusing an interest into, and giving a meaning to, necessary domestic work, such as it has hitherto lacked.

Needlework, itself an ancient art—for the Chinese were expert needleworkers when Britain was inhabited by skin-clothed savages—has been evolved from the still more ancient art of weaving. The primitive woman used her fish-bone needle, first in weaving baskets, and later in weaving fabrics.

In the school needlework lessons of to-day every effort should be made to bring into use the child's activity, imagination, and love of colour. Its work should be a joyful experiment, not a monotonous toil. No white sewing, or dainty little stitches, for the tiny folk! White stitches in white material are as trying to the young child's eyes as drawing with white crayon on white paper. There must be bright reds, blues, yellows, and greens, in long stitches woven into simple designs. From the very beginning, the child should be encouraged to experiment and to construct; its imaginative power is strong—let it express itself in beautiful forms.

From the very beginning, it is important to insist upon clean work; a pretty pattern, soiled by dirty finger-marks, loses all its attractiveness. Posture is of equal importance. If a child sits in a crouching, huddled-up position, it will injure spine, chest, and eyes. She should sit upright, with the head slightly bent forward and with both feet on the floor.

As the child grows older, she will desire to express herself in the construction of useful and dainty things, and various articles of wearing apparel, tasteful types of which she will be able to design and cut-out for herself. All this will be done side by side with what is known as plain sewing. Every effort should be made to develop the child's artistic tendencies, and thus help to banish the tawdry, the drab, the ill-fitting, and the ugly, both from the home and from the person.

Chapter XIV.

DRAWING.

Steps in Drawing.

We must beware of imposing adult methods upon young children. It may be suitable in an upper class to insist upon detailed observation of the object, a careful estimate of its proportions, and so on; but that is the wrong method for little people. As certain prominent English and Continental educationists have pointed out, there are several stages marking the development of the power to draw accurately. When a young child draws a house, a pig, or a man, he puts into it all that he knows about the object, quite regardless of the relative positions of the various parts. He will put two eyes in the profile view of the man, and will show other parts that from his position are invisible. Later on he will pay more attention to relative position, and will be more particular as to detail; but as a rule he will not attempt to express space or solidity without the guidance of the teacher. A few children, naturally gifted, will pass through the various stages rapidly and efficiently; but, for most, each stage in the development must be noted, and the necessary individual help given.

It will be found a valuable exercise to allow a child to bring a young plant to school and to make periodical drawings of it with dates attached. The drawings will doubtless be crude in the lower classes, but they will serve their purpose. This method will

lead the children to watch and note the plant's growth, and to record what they see; moreover, the comparisons will be useful and interesting. The drawings can be done in mass, with crayon or brush. Such exercises will train the children to observe closely, and the result will be seen in the more accurate drawing of other objects.

Variety in Drawing. A reasonable amount of variety in the drawing lessons will be found helpful and interesting. As a rule drawings should be shaded or in colour, and natural colours should be used. Occasionally a drawing lesson should be devoted to the illustration of a story or fairy tale. Drawings should be made to illustrate nature-study and science lessons. Parts of machines should be drawn and shaded. Model drawings of such things as the open classroom door, showing as much of the outside of the room as can be seen from the child's position, should be made; silhouette drawings of buildings, etc., can be done in paint, crayon, or ink. Variety of this kind will also help to rid children of the idea that drawing is only for the drawing-lesson proper, and they will come to appreciate its use in many ways.

Drawing Media. Drawing the same object with various media will be found to afford valuable training in accurate observation.

A geranium leaf or fuchsia spray may be drawn in pencil, and then with pen, crayon, and paint-brush. It can be taken in different positions, done in outline or in mass, and can be shaded or coloured.

Errors made should not be corrected by black-

board illustrations, but by leading the children to compare and contrast their drawings or any parts of them with the corresponding parts of the object before them. Their drawings express what they see, and they must be trained to see accurately. With younger children the object may be made in clay or other plastic material before any drawing is attempted. These methods will train the children in perception, and will lead them to notice detail as well as mass.

Scales in Drawing. Let children discover for themselves the necessity of using scales, and the method of making them. Give the children a simple object to draw, that has length or width too large for the paper. They will soon find out that it is too large, and probably some child will suggest making the long side half the size. Let them try that. Some will be found to have made the short side full size. Let them compare the object and the drawing, and find out what is wrong. They will notice that it is out of proportion; one side is too long compared with the other. They will probably suggest that this side must be shortened also ; perhaps they will suggest that its length should be halved as in the former case.

When this has been done, give out some smaller pieces of paper, and tell them to draw the object again, but that it must be in proportion and accurate. They may try half again or even a quarter, and then find that the paper is too small to hold it. Some may even attempt again to use two different units for the two sides ; let them do it, and they will soon discover that this makes the drawing wrong in shape.

and so they will learn that only one unit at a time can be used. From this it will dawn upon them that they can use a definite short length in the drawing for a definite longer length in the object; say, 2 inches to 1 foot, or 1 inch to 1 foot.

This method will take up more time, but it will be found far more educative and valuable than *telling* the children what to do, and it will enable them to see and understand the practical value of scale drawing.

Chapter XV.

SINGING.

Early Ear Training.

One of the earliest exercises with young children should be to train the ear to distinguish whether the voice is moving up or down the scale. Begin with wide intervals, and narrow them down to moves up or down of one tone, or of half a tone. Let the children close their eyes, put out the arm at full length, and point with the first finger. When a note is sung by the teacher and another one follows, let them move the finger up or down according to the direction of the note. For a wide interval let them take a wide sweep of the arm; for one step in the scale, a slight move up or down, the other intervals corresponding.

When this can be done accurately, put the modulator in front of the class; tell the children to look at it while you sing several notes by name; after a brief pause, sing another note to "koo" and let the children name it. For example,

d r m f s—koo (d^1) ; d^1 t l s—koo (m)
m f m —koo (s) ; s m d r—koo (s$_1$)

This may be done at first by the whole class, and then by individuals. When it can be accomplished without difficulty, proceed to the teaching of the various notes of the scale singly, according to their mental effects. After illustrating the particular quality of a note—*soh*, bold and bright; *fah*, plaintive, and so on—slowly sing, to "laa" or "koo," a phrase containing that note, and let the children

close their eyes, and put up their hands when you come to the note. With practice they will soon be able to distinguish the various notes when sung one at a time.

Part-Singing. Some years ago, a good deal of two-part and three-part singing was done in the upper classes of the elementary school; to-day unison-singing is the rule, almost to the entire exclusion of part-singing. Every teacher knows that unison-singing is of great value; it gives him time and opportunity to develop tone, light and shade, and phrasing power; but its premier value should not allow it to crowd out training in harmony. Children always enjoy part-singing when it is properly taught; and it is quite certain that the famous choral singing of Yorkshire and Lancashire owes something to the work of the elementary school teacher.

The cause of this decline in part-singing has been largely due to the methods employed. Singing has been taught in the past by all teachers, whether they were particularly musical or no; often with disastrous results. It should, of course, be taught only by teachers who are really musical; and this is a matter of easy arrangement in most schools. Moreover, great care should be taken in the choice of pieces and in the choice of voices. To assign the first part to Standard V., the second to Standard VI., and the third to Standard VII., is the way not to do it. There is no reason why the children should not study all the parts, or why there should not be in some cases an interchange of parts. If very easy two-part modulator singing is begun in the lower

classes, and the children are trained to listen to the part which the other section is singing, they will in time appreciate and enjoy the harmony, and there will be no need for the teacher to tell them not to mind what the other section is singing, but to mind their own, for they will be able to mind both.

When a two-part exercise is put on the blackboard, use different coloured chalks; when pointing on the modulator use different coloured pointers. Plenty of exercises with thirds, fifths, and sixths will be found very useful. Rounds in the lower classes, when sung softly, will give good practice.

Tone in Singing. One of the chief aims of a teacher of singing is to produce a good quality of tone—the church choir boy's voice.

A necessary factor in the production of good tone is correct breathing. As a rule, children use up their wind too rapidly, and then singing often becomes shouting; it also loses its smoothness and becomes jerky. Constant practice is needed in correct inspiration and expiration. The children should be taught to take in a deep breath slowly through the nostrils, and then breathe out quickly. When this has been repeated a few times, try the reverse order; take in a deep breath quickly, and then breathe out slowly. Repeat this three or four times. It can be varied by letting the children stand, and raise and lower their arms from and to their sides during the processes of inspiration and expiration respectively.

They should also practise singing softly down the scale to "koo" and "laa," beginning with C, and then rising a note at a time to D, E, F, G.

The following exercises will also be found useful

for practice, and may be sung to "laa" or "koo" in one breath :—

(1) d r m f s l t d' d' d' t t t l l l s s s f f f m m m r r r $\widehat{d}$

(sung in various keys)

(2) d m s m d m s m f l d' l f l d' l s t r' t s t r' $\widehat{t\,d'}$

Odd Moments for Music.

There are occasional odd moments between the day's lessons, and times when subjects drag, that can be readily utilized for musical exercises. At the beginning or end of certain lessons one or two minutes can easily be used for breathing exercises, manual or modulator practice, a few ear exercises, a bit of staff notation work with the fingers, voice production, cultivation of tone, or the mastering of some awkward interval or length of note. In this way a good deal of ground is covered, and weak points are effectively dealt with without really robbing any other subject.

Chapter XVI.

PHYSICAL TRAINING.

Ordinary Games Insufficient.

Nobody nowadays questions the value and necessity of physical training. *Mens sana in corpore sano* is now an accepted maxim, a fact that need cause no surprise after what the medical examinations for the army have revealed. As Mr. Lloyd George said, "You cannot run an A1 Empire with a C3 population." The business of the schools is to see to it that the rising generation has better health and greater staying power than any generation that has preceded it.

Some people argue that ordinary games supply all that is needed. Plenty of cricket, football, rowing, tennis, fives, net-ball, cycling, running, walking, jumping, and skipping affords all that is required. But upon examination it will be found that nearly all games exercise mainly the legs and right arm. The confinement of physical training to ordinary games would mean an abnormal development of the lower part of the body at the expense of the upper part and of the internal organs.

What is needed is a general development of the body as a whole, and this can be attained only by a scientific system of educational exercises. Such exercises must be interesting and suitable to the ages and physical fitness of the children. Great care is needed to prevent any child suffering from overstrain. There are considerable differences in the

physical stamina of children of the same age, and so the teacher must be on the alert all through the lesson to detect when any child is continuing beyond his strength.

The Swedish system was adopted by the Board of Education in 1904, and though complaints are made regarding its monotony, yet if games are interspersed with it, and the Eurhythmics of M. Dalcroze with their musical accompaniments are also taught, probably no more suitable system can be devised. The day may come when some genius will invent a series of simple and interesting games that will exercise all parts of the body in the same way as the Swedish exercises do. May it be soon !

Physical Exercises. Mental work and physical work should be as evenly balanced as possible in the school curriculum, and should be made to alternate. Subjects such as handwork, writing, art work, and physical exercises should be interspersed with those lessons where the hands are used little, if at all. Physical exercises, taken in the proper way at the proper time, are a valuable counterbalance to hard study, though not a remedy for mental fatigue. They should not be taken at the end of a school session, nor immediately prior to a recreation interval ; nor should the time be entirely split up into short periods between lessons. With these reservations, there is ample choice left for the teacher both as regards place and length of lesson.

Care should also be taken to avoid the violent performance of the exercises. It may please the eye to see the children putting every ounce of strength

into the various movements, but in reality they may be doing themselves more harm than good, especially if they were mentally fatigued to begin with. Many fine athletes ruin their constitution and meet an early death through overstrain. Gentle, precise, rhythmical movements will be far more beneficial than any violent action.

Children delight in regular movements; they delight to march in step to a band, or to dance to the tunes of the street piano. Though it is heresy to say it, there is no good reason why the Swedish exercises should not, occasionally at any rate, be led by pianoforte accompaniments. It is the constant repetition of commands, such as :—

"Head backward—bend":
"Arms upward—bend";
"Trunk upward—stretch";

that bores children. Add music and boredom disappears; and then the exercises become pleasurable as well as valuable.

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